

# American Gas *Association* MONTHLY

Research Lights the Gas Way

•

Nominating Committee Report

•

Manufactured Gas Situation

•

Britain's Postwar Prospects

•

Customer Problems in Wartime

*July-August*



1944

VOLUME XXVI NUMBERS 7 AND 8

*It's hot, but baby sleeps with ease...*  
*He's cooled by air like a mountain breeze!*



**WON'T IT BE WONDERFUL** to live in a house that's cool in July... balmy in January? Where at the flip of a finger your new Gas air-conditioning system gives you the *exact* temperature you want—all year 'round!

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**THE MAGIC FLAME THAT WILL  
 BRIGHTEN YOUR FUTURE**



## CONTENTS FOR JULY-AUGUST 1944



Exactly a year ago, our leading article paid tribute to the role of the gas burner in research laboratories. It is appropriate, therefore, that the substantial progress made during the year in developing that burner be reviewed here. Mr. Conner points with justifiable pride to the development of the 100% primary air burner—an achievement which bids fair to outstrip all others in practical postwar usefulness. . . . The natural gas industry has chalked up a chemical advance of the first magnitude in developing the McKamie gas cleaning plant. To quote the authors: "Knowledge gained in this broad new laboratory will provide material for many future reports." . . . Along the same line, E. L. Hall, whose company operates a complete manufactured gas by-product recovery plant, hints at the bright future awaiting pioneers of new gas-making processes. He advises gas utilities "to seek their place in the sun as purveyors of the raw and intermediate materials for chemical industry." . . . That the industry is devoting no little effort to improving gas-making processes was apparent at the Production and Chemical Conference, reported herein. . . . It all adds up to a better product and finer utilization equipment for postwar America.

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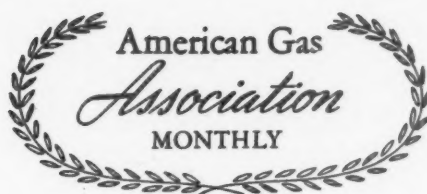
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Precision measuring instruments have always been vital to research. This micromanometer at the A.G.A. Testing Laboratories measures pressures to one tenthousandth of an inch.





JAMES M. BEALL, *Editor*

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## RESEARCH WILL LIGHT THE WAY

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A YEAR ago the American Gas Association appropriately and dramatically hailed the decision of its Executive Board to enter upon the broadest and most extensive domestic gas research program in its history. In an article by Eugene D. Milener entitled "All the Lights Have Not Gone Out" the author took as his text the following tribute to the gas burner:

"In thousands of laboratories . . . despite the national emergency . . . men work on with the pale flame of the Bunsen burner. For this is the lamp of research that lights our road and lightens our load. Knowing there will always be a tomorrow, the men with the burner keep looking for better ways of alloying steel, better ways of baking bread, better ways of making dyes, better ways of doing everything."

It was with anticipatory optimism—certainly with staunch faith—that the author on that occasion expressed his conviction that new horizons were being opened for the very industry that first produced this symbol of research. That faith has been justified in the year that has since passed—a length of time far shorter than that which most of us directly charged with the responsibility of research believed possible for the substantial accomplishments already realized. They are perhaps best exemplified by the enthusiasm with which the research that has been so far carried out was received at recent technical conferences in Cleveland and Los Angeles and the excellent reception accorded nine research bulletins published during the past calendar year.

One single accomplishment, in the opinion of many in the gas industry, stands out as the most significant achievement of this program. It is the development of a 100% Primary Air Burner at the Testing Laboratories. I do not propose to coin a popular name for it, but with the previously quoted text in mind I often think of it as the "Brighter Bunsen." For although its flame is radically dif-

By R. M. CONNER  
*Director, American Gas Association  
Testing Laboratories*

ferent it is still a Bunsen burner in principle. Symbolically as well as literally it burns brighter—sharp and hard and blue. Its development has

progressed sufficiently far so that it may now be said that the guiding light of gas industry research burns with a new brilliance and that its rays may reveal many worthwhile developments yet to come.

Lest an impression such as that of Aladdin rubbing his lamp be left by these thoughts of the future, we must bear in mind that achievements of practical value derived from basic knowledge as a rule develop slowly and only after the expenditure of a great amount of experimental effort. Manufacturers and designers have been developing, expanding, and improving contemporary burners to their present state for the ninety years that have elapsed since the Bunsen burner was discovered. Development of a 100% primary air burner is properly an achievement similar in kind to that of Bunsen.

Just as the efforts of many have gone into the practical application of the Bunsen burner, so will it require the efforts of many to do the same for the newer type. Chairman Everett J. Boothby of the Committee on Domestic Gas Research has aptly pointed out that it is not intended that the research activities of the American Gas Association should in any way usurp the prerogatives of manufacturers and gas companies to prosecute research to the fullest extent of which they are capable. Considering the practical development work which lies ahead in the perspective of that which was required to utilize present types of burners to the best advantage, little chance is left that such usurpation would be possible even if it were so intended. The possibilities are too extensive, too broad, and will require far too much effort.

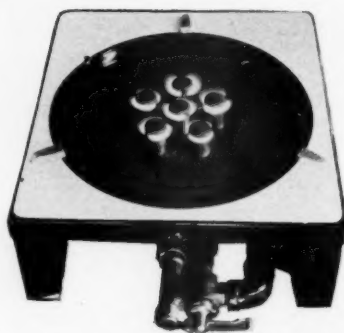
The flame of the all-primary air burner is radically different from that of a conventional type. First of all it is considerably shorter, consisting of a single cone upon the surface of which complete combustion takes place. Hence

the usual secondary combustion zone or outer mantle of the Bunsen flame is completely absent. This characteristic eliminates many design problems encountered, especially on ranges, in supplying sufficient secondary air to the flame for complete combustion. Aeration bowls, port arrangement for adequate secondary air, blanketing effects of recirculated combustion products, and impingement—problems of contemporary design—have no counterpart in burners utilizing all primary air. They will burn city gases completely in the products of their own combustion.

### More Compact Equipment

These characteristics when properly harnessed for domestic application readily suggest many improvements in contemporary appliances. Concrete applications should come many times faster than parallel developments in conventional types. The extent of possibilities which can reasonably be foreseen at this time depends on the development of practical models of experimental burners so far available. Generally speaking, elimination of secondary air inlets and substantial reduction in combustion space means more compact equipment. Short, sharp, and efficient single cone flames should further advance compactness and lead to greater heating speeds and efficiencies. Overall improvement in thermal control, heat transfer rates, efficiency, and appearance can be expected to accompany general use of 100% primary air burners.

Translated into specific applications, a new freedom of design can be discerned. It probably will emerge as the emancipator of the gas range from sundry trappings which stand in the way of smooth top styling. Little



*Experimental 100% primary air burner utilizing natural gas at ordinary pressure*

clearance or venting height is required. Grates may conceivably be constructed flush or eliminated by incorporation into burner design. Higher oven pre-heating speeds and broiler temperatures should prove more practical. Redesign of size and placement of oven and broiler burners likewise seems probable, resulting in better heat distribution and more usable space.

Similarly in water heaters, furnaces, and space heaters many of the same potentialities apply. Elimination of large quantities of excess air to insure complete secondary combustion should lead to higher efficiencies. The cooling effect of strong stack action to handle this excess air can be overcome while greater baffling becomes possible.

Further research on the new type burner is proceeding at an accelerated pace. Numerous problems presenting many difficulties are still to be solved. It is believed that those applying to natural gas do not present major difficulties. Some applying to manufactured gas—notably flash-back—will require further and ingenious development before they are overcome. In general most successful application of this new principle will require specific application to the various gases and more precise engineering and manufacturing for satisfactory performance in the field. Prompt publication of preliminary findings has opened the door for further study by many groups.

Our whole approach has been typical of all research projects conducted by our institutions under guidance and direction of the American Gas Association's Committee on Domestic Gas Research. Although this group's program has been greatly accelerated during the past year for the express pur-

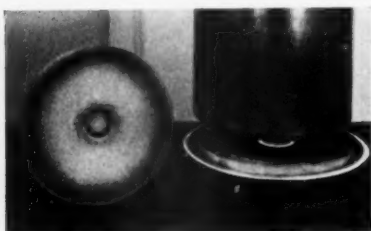
pose of aiding manufacturers to meet postwar conditions, it has been in progress since 1935. In promoting the advancement of fundamentals upon which commercial improvements and new ideas are based, the committee is aided by Technical Advisory Subcommittees, composed of engineers and executives of both utilities and manufacturer companies, for each type of appliance. Four such groups are now functioning, one each for gas cooking, gas water heating, central gas space heating and direct gas space heating research.

Broad scale aspects of the program are determined by the main committee which charts general courses to be followed and formulates policies for best accomplishing the overall objectives desired. Each technical group assists by formulating practical plans covering the project assigned it and in preparing comprehensive detailed working outlines for its conduct. They recommend priorities for particular projects both on the basis of original value and important clues discovered as research progresses. Moreover they review current progress and on the basis of developments revise or redirect research efforts as necessary.

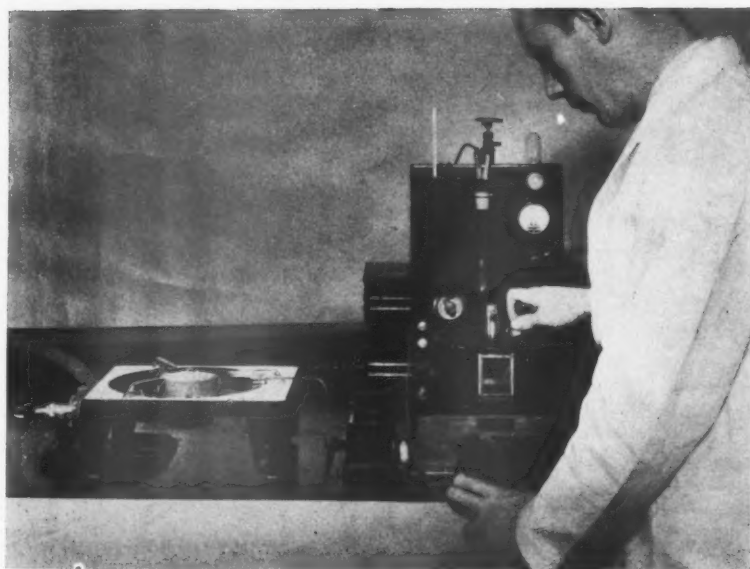
### Smashing Bottlenecks

The committee's research program is extensive in scope and is designed to overcome fundamental technical problems that limit the optimum application of gas in the home. It provides the soundest possible scientific foundation on which gas appliances of the future may be designed and built. Obviously full basic information must be secured and made available for this purpose. Like the study of 100% primary air burners, research activities are aimed at smashing bottlenecks that when broken will automatically open larger vistas of applied research, advance development, and encourage ingenious and novel ideas.

In addition to the treatises on the 100% primary air burner, the Committee on Domestic Gas Research has sponsored the publication of nine research bulletins within the past twelve months. Together with seven others previously published they present results of a series of studies which have gradually translated the technique of burner design and various factors af-



*Experimental small diameter horizontal slot-port burner with forced injection of all primary air for combustion. Ring-type baffles increase efficiency*



*Thermal conductivity apparatus used to determine percentage of primary air entering experimental burners*

fecting heat application, control and distribution from what in the past have been characterized as "rule of thumb" to fundamental or empirical relationships.

These sixteen bulletins have greatly added to the common pool of scientific knowledge as applied specifically to gas appliance design and manufacture. They undoubtedly constitute the most helpful and important tools of knowledge available anywhere on such subjects to engineers and designers of domestic gas appliances.

Research bulletins published this past year which have particularly aided our appliance manufacturers are those

dealing with such important engineering relationships as burner head volume to ignition and extinction characteristics, primary air control devices, and, as set forth in latest Research Bulletin No. 26, new relationships for mathematically calculating primary air entrainment from such data as dimensions of the burner, composition of fuel gas employed, and gas pressure.

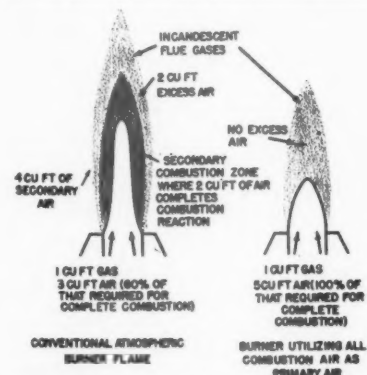
In meeting problems of the postwar period, these new studies represent valuable additions to the basic design knowledge embodied in the former series of research publications. Some of the other bulletins published this

year of salient postwar significance in appliance engineering lay the foundation for automatic single point gas range ignition, superior performance characteristics of gas range top sections in terms of heating speeds and range of turndown, improved water heater performance, and elimination of resonant noise in furnaces. Current studies under way to be covered in future bulletins include such subjects as luminous and non-luminous burners, ignition by electrical means, oven heat distribution, and water heater efficiency.

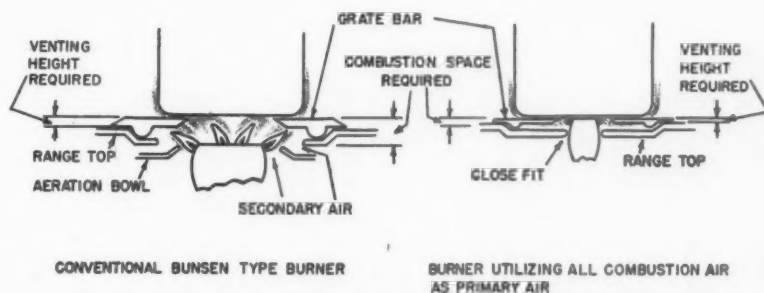
### Postwar "Must"

Considerable current interest centers around research investigations concerned with automatic ignition and improved water heater performance. Flash tube and electric ignition studies were undertaken as the result of a growing consensus that fully automatic appliances will become a postwar "must." Hall M. Henry, chairman of the American Gas Association Postwar Planning Subcommittee, has stated that "matchless" lighting must be developed—automatic lighting without ever having to use a match. In preparation for whatever the trend may prove to be, the Committee on Domestic Gas Research authorized study of means of providing both types of automatic ignition.

Principles of single point automatic lighting for all service sections of the average gas range from one standing pilot and resultant advantages for the housewife resulting therefrom are presented in Bulletin No. 21. They



*Comparative characteristics of Bunsen and 100% primary air burner flames*



*Comparative requirements for application of contemporary Bunsen and 100 primary air burners in gas range top section*

may well become a new feature of postwar models. Long, experimental flash tubes were developed for ignition of oven and broiler burners and design data published. Such single point ignition was accomplished some years ago for limited application. It has now been demonstrated that this type of lighting is entirely feasible for natural, mixed, and manufactured gases. A simple slot running almost the entire length of the flash tube corrected former difficulties and made the banishment of additional standing pilots possible.

From the standpoint of general range design, a number of prominent men in our industry have pointed out that the development of single point ignition removes another technical barrier to freedom of design. Sharing by oven and broiler of a common second pilot to eliminate the use of a third is now unnecessary. It may be that the new flash tube will do its part towards promoting greater incorporation in gas ranges of features in which, as surveys indicate, women are very much interested, for example, "table top" models which at the same time do

not have "low" broilers with attendant disadvantages of lack of ready visibility, difficult cleaning, and the necessity of stooping. As far as ignition only is concerned, this new development makes side by side placement of oven and broiler directly under the work level a comparatively simple matter, with a corresponding change in the space usually employed for storage purposes.

Our study of electric ignition consists of a comprehensive investigation of all pertinent factors involved. Placement and methods of using various types of igniters of both hot wire and spark types, and variations of air-gas mixtures which can be ignited under different circumstances as well as many other similar and related concepts are likewise being studied.

Our latest bulletin in the series on domestic water heating—No. 19, is confined to a single phase of water heater performance and deals primarily with the effect of cold inlet water on combustion, burner operation, flueway capacity, condensation, corrosion and efficiency. It supplements previous studies covering principles of design and the obtainment of maxi-

mum delivery of usable quantities of hot water. In progress is an additional investigation devoted to the study of improvement of water heater efficiencies in service primarily by means of more effective sizing and selection, depending on the customer's specific needs.

In considering practical applications, it is not for us at the Laboratories to say in what direction the application of research findings should proceed, or are we in a position to judge what will best appeal to the public, or for that matter, what specific designs can best be merchandized. These are considerations with which many different branches of the industry are concerned. In the conduct of the program described we simply act as agent of the Committee on Domestic Gas Research by investigating and developing fundamental factors which may best serve all concerned. It is our duty to carry out these undertakings, applying basic scientific laws and relationships in such a manner that they will eventually improve the performance of gas appliances. It was in pursuit of such aims that the 100% primary air burner was created. It is confidently expected that other findings of an equally valuable nature will follow.

## A. G. A. Annual Meeting To Be Held in Chicago



R. G. Griswold

THE twenty-sixth annual meeting of the American Gas Association will be held at the Stevens Hotel, Chicago, Thursday and Friday, October 5 and 6, according to an announcement by President Ernest R. Acker. In accordance with the wishes of the war agencies, the meeting has been shortened and streamlined. Discussions will be limited to problems of winning the war and preparing for the peace.

The day preceding the annual meeting, Wednesday, October 4, will be devoted to committee meetings, committee luncheons and dinner meetings.

Present plans are to give the morning and luncheon period on Thursday to the Technical, Residential Gas, Industrial & Commercial Gas and Accounting Sections. It is expected that the General Sessions will begin at 2 o'clock on Thursday in the hope of final adjournment at noon Friday.

Arrangements are being directed by a Program Committee under the chairmanship of Robert G. Griswold, president, Electric Advisers, Inc., New York. Assisting Mr. Griswold are: Joseph E. Bowes, president, Oklahoma Natural Gas Co., Tulsa; John A. Fry, president, Detroit-Michigan Stove Co., Detroit; N. Henry Gellert, president, Seattle Gas Co., Seattle; Robert W. Hendee, general manager, Colorado Interstate Gas Co., Colorado Springs; Carl H. Horne, vice-president, Alabama Gas Co., Birmingham; Thomas L. Kemp, general manager, Citizens Gas & Coke Utility, Indianapolis; Charles G. Young, manager, Springfield Gas Light Co., Springfield, Mass.; and President Acker.

### Real Progress Made

In summarizing domestic research activities of our Association initiated during the past year as part of its accelerated program authorized by its Executive Board, it becomes self-evident that real progress has been made and that even greater accomplishments lie ahead. Guiding policies fortunately have been carefully thought out, are based upon sound ground, and are coordinated with activities such as those of our Postwar Planning Committee. Furthermore, they are geared to meet the needs of the times as well as the long range objectives of our business. Whether we view our industry's future from the standpoint of postwar problems or even more distant objectives, our research program is one that will assist it tremendously in traversing the highways of success. Today the flame of research burns with a new brilliance, lighting the paths of progress not only for our people but ultimately, we firmly believe, for all mankind.



# "Golden Molasses" . . . *The Story of By-Product Recovery at the McKamie Field*

THE McKamie Gas Cleaning Company is a small corporation which has just completed a plant for treating the extremely sour natural gas produced in the McKamie Field in southwestern Arkansas. This natural gas is the sourest yet known, having a hydrogen sulphide content in excess of 4,000 grains per hundred cubic feet. At present the hydrogen sulphide content in the gas reaching the plant is averaging 4,450 grains per hundred cubic feet.

To place this in proper perspective it is interesting to note the sulphur concentration in other gases. Sour gas found in the Sissonville Field in West Virginia reached a maximum of 50 grains per hundred feet. Sour gas from the presently active wells in the Amarillo Field in Texas in no case exceeds 162 grains per hundred cubic feet, with most of the sour wells being under 10 grains. The sourest natural gas previously encountered, the Chestnut Ridge Well of The Peoples Natural Gas Company in western Pennsylvania, approximated 1,500 grains of hydrogen sulphide per hundred feet.

## Quantities of Free Sulphur

The problem posed by this McKamie gas is better realized by considering that each thousand cubic feet carries the equivalent of about 5 pounds of free sulphur. The day's normal expected production of 26 million cubic feet of gas brings the equivalent of about 60 tons of free sulphur out of the ground.

For many months this extremely sour gas was flared as a nuisance, causing several deaths, property damage and much general complaint. But the problem of treating it was attacked late in 1941 and with the recent completion of facilities of the McKamie Gas Cleaning Company and Southern Acid and Sulphur Company, the sour gas has been brought under control. There now comes from the field a

- This report deals with the initial step into a new field in the science of natural gas. It is the development of an installation in which the hydrogen sulphide removed from sour natural gas is converted into free sulphur—"golden molasses" the operators call it. By this means, a dangerous poison gas is neutralized and rendered harmless to both life and vegetation. In addition, there emerge large commercial quantities of a new and useful by-product.

- It was presented at the A. G. A. Natural Gas Spring Conference at French Lick, Ind., May 11-13, 1944.

By C. W. COOPER

*Vice-President, Consolidated Natural Gas Company, New York, New York*

In collaboration with HOWARD WADDLE, *Engineer, McKamie Gas Cleaning Company, Magnolia, Arkansas*

stream of dry, sweet gas wholly free of hydrogen sulphide and fit for domestic use. This gas meets the lead acetate test which means that it has 1/10th grain of sulphur or less per hundred cubic feet. Gasoline, normal butane and isobutane are being produced. And the tremendous quantity of hydrogen sulphide removed from the gas is being transformed into solid sulphur and carted away by railroad for use in the manufacture of sulphuric acid and other industrial products.

Thus a large reserve of gas is being saved for use as fuel. And the initial step is being taken into a new field in the science of natural gas—the recovery of free sulphur.

The McKamie Field is a small isolated dome, approximately 3,200 acres in extent. Gas is found in the Smackover Lime at a depth of 9,000 feet and had an original rock pressure of over 4,000 pounds. The field was discovered by Atlantic Refining Company and is now shared by Atlantic, Standard Oil Company (through its subsidiary Carter Oil Company) and several independents. At this time there

are 18 producing wells (with one well being drilled).

The field was drilled primarily for distillate. But distillate constitutes only part of the reservoir content and the remainder is extremely sour gas. This gas is predominately methane and ethane and is rich in propane, normal butane, isobutane and pentane. It is produced at rates of 20 to 26 million cubic feet per day, depending upon the production of distillate. At these rates the field is expected to last 15 years and probably longer.

## Three Separating Streams

The sour gas is separated from the distillate in three streams. A high pressure stream of gas comes off the first well-head separator at 700 pounds. The production in this stream is between 20 and 22 million cubic feet of gas per day, of which 7 per cent is hydrogen sulphide. A medium pressure stream comes off the second separator at 60 pounds. The production in this stream is 2 million cubic feet per day, of which 20 per cent is hydrogen sulphide. Additional gas emanates from the distillate storage tanks at pressures of a few ounces. Production from this source is 1 million cubic feet per day, of which 25 per cent is hydrogen sulphide.

On an average hydrogen sulphide represents 1½ million cubic feet out of a daily sour gas production of 20 to 26 million cubic feet.

Three obstacles stood in the way of handling this McKamie gas. In the first place, there was no market for the gas, either sweet or sour, in Arkansas, yet state officials were insistent that it be used within the state. This meant that if the gas could be purified it would be sold in a cheap market at low prices. In the second place, no natural gas with so much hydrogen sulphide had been commercially purified. It was not known whether purification would be possible, or, if possible,



whether the cost would prohibit sale at the low potential prices. In the third place, if the hydrogen sulphide were removed from the gas and flared, the concentration of this poison would increase its capacity for doing injury to persons and property.

By the middle of 1941, when the flaring of gas had gone on for about a year, the McKamie Field was a nightmare to the producers. Something had to be done about it and in the fall of that year the Standard Oil Company took the first tentative steps toward a solution.

During the latter part of 1941, a tentative market for sweet gas in Arkansas was developed. Arkansas Power and Light Company announced its desire to install a power plant near the McKamie Field provided it could obtain a firm supply of gas for boiler fuel. This meant a load up to 10 million cubic feet per day.

#### Defense Plant Demands Met

At the same time, Arkansas Louisiana Gas Company became in need of additional supplies to meet demands of several Defense Plant Corporation projects and announced its desire to take gas for the duration of the war. However, a long term outlet was needed, and Arkansas Louisiana Gas Company agreed to take gas from the field for a long term provided it could, at its option, sell like quantities of gas in the Monroe Field to Interstate Natural Gas Company, a Standard Oil Company subsidiary.

The prices in these two sales outlets would provide roughly a two cent spread over the field price. The question was whether the sour gas could be gathered, sweetened, cleaned and delivered for this amount.

During the fall of 1941, the Girdler Corporation of Louisville, Kentucky, was invited to install an experimental sweetening unit in the field to determine whether the hydrogen sulphide could be removed and for several months that company made test runs. Toward the end of the year, Girdler reached the conclusion that the hydrogen sulphide could be removed with its normal amine process.

Also during the latter part of 1941, it was determined to find out whether the tremendous quantities of hydrogen sulphide could be transformed into

solid sulphur. This would eliminate a dangerous poisonous gas and might provide a valuable by-product. Accordingly, several of the leading sulphur companies were invited to experiment on the hydrogen sulphide stream being produced from the experimental Girdler plant. Two companies responded—Texas Gulf Sulphur Company and Southern Acid and Sulphur Company. After several months of experiment each of these companies announced that the hydrogen sulphide stream represented a commercial source of sulphur. Southern Acid and Sulphur Company offered to purchase the entire acid stream for a long term, at a price based upon tons of sulphur produced.

#### Sweetening Plant Built

When the developments had reached this stage it appeared that the sour gas might be rendered useful and the two principal producers, Standard and Atlantic, determined to build a sweetening plant.

To provide a vehicle for this, they caused the incorporation of McKamie Gas Cleaning Company—which is owned and financed on a 50-50 basis. The project was conceived and has been developed as a non-profit venture which will treat all of the gas produced in the field.

On the supply end the McKamie Company made gas purchase contracts with all the producers operating in the field. The price is a flat amount for the sour gas at the well and varying percentages of any revenues derived from by-products. With respect to hydrogen sulphide the royalty is 3/16 of the revenue derived from the sale to Southern Acid and Sulphur Company.

On the outlet side, the McKamie Company made contracts with Arkansas Power and Light and Arkansas Louisiana Gas Company for the sale of the entire output of the treating plant, to be delivered near the plant site.

Liquefied by-products, such as normal butane, isobutane and gasoline are reserved for sale under spot contracts.

Lastly, a contract was signed for the sale to Southern Acid and Sulphur Company of the entire hydrogen sulphide stream which will come from the bottom of the Girdler tower.

With the outlines of the project de-

termined by these contracts, work was begun in the summer of 1942. It was completed in March of 1944.

From the plant site a gas gathering system extends out to the 18 wells in the field. The most interesting feature of this system is that it is really three parallel systems, necessitated by the fact that gas is taken at three widely different pressures at each well. These are the 700-pound, 60-pound, and tank vapor streams mentioned above.

The high pressure 700-pound stream is gathered, treated and delivered at natural pressure, entering the treating plant at about 650 pounds. The two low pressure streams are compressed at the plant to this 650-pound intake pressure.

After the three streams are commingled, the whole stream of 22 to 26 million cubic feet first passes through the contact tower of the Girdler unit where all hydrogen sulphide and carbon dioxide are removed.

From the top of the Girdler unit there emerges a stream of wet, sweet gas of 20 to 23 million cubic feet per day. From the bottom of the Girdler unit there comes off an acid stream of hydrogen sulphide and carbon dioxide in the amount of 2.3 to 3.5 million cubic feet per day.

#### Propane and Butane Removed

The wet, sweet gas at the top of the Girdler unit flows through a gasoline plant of normal design where, in successive towers, the propane, butane and gasoline are removed. From the downstream side of this gasoline plant the natural gas passes through a dehydration unit and then emerges in the amount of 18 to 20 million cubic feet per day, at a pressure of 600 pounds.

Butane amounts to about 15,000 gallons per day and this passes through an isobutane tower to be cracked into normal butane and isobutane. Gasoline amounts to 17,000 gallons per day. These products each flow through a copper sweetening unit where any mercaptans are neutralized. The liquefied products are then pumped into spherical tanks to be held for delivery into tank cars or pipe lines.

The acid stream of hydrogen sulphide and carbon dioxide coming from the bottom of the Girdler tower is emitted at pressures of approximately 30 pounds. This stream consists of 52

per cent hydrogen sulphide and 48 per cent carbon dioxide. If, at the moment, the sulphur plant of Southern Acid and Sulphur Company is shut down, the acid stream is flared from a tower 200 feet in height. Normally, however, the stream flows directly into the sulphur recovery plant.

In the sulphur recovery plant, the acid stream first enters a furnace where it is mixed with a limited quantity of air and is partially burned. In this way a portion of the hydrogen sulphide reacts with oxygen to form sulphur dioxide and water. From the furnace the remaining acid gas and the products of partial combustion flow through a waste heat boiler where the temperature is reduced and then into a converter where the sulphur dioxide formed in the furnace and the remaining hydrogen sulphide react to form molten sulphur. The molten sulphur is then separated off and flows into run down tanks to be measured. From the run down tanks it is pumped into a walled enclosure in which it solidifies.

#### By-product Yield

Since starting on March 9, 1944 the daily produce has varied between 51.96 and 68.9 gross tons, depending upon the volumes treated. During this period, 96.7 per cent of the hydrogen sulphide has been converted into solid sulphur.

To summarize operation for the month of March, 1944: The average sour gas intake was 22.6 million cubic feet per day. This gas was turned into the following products:

Dry sweet fuel gas	18,000,000 cu.ft. per day
Normal butane	7,800 gals. per day
Isobutane	7,600 " " "
Natural gasoline	17,000 " " "

During the 23 days in which it operated in March, the sulphur plant produced 1,214.6 tons of pure sulphur. This represents approximately 51 tons per day for this first partial month. To date the yield averages about 60 tons per day. When the installation goes into full operation and particularly when the tank vapors (which are richest in butanes and gasolines and also richest in hydrogen sulphide) are turned in, the yield of sulphur will be increased. At present tank vapors are not being collected due to troubles with the design of traps and valves.

In the matter of costs, there is too little experience to provide any accurate picture, but this much may be said: The spread between the purchase and sales prices of gas is around 2 cents per thousand cubic feet. With this differential and with the money received from the sale of by-products, it is expected that the plant will pay out over the life of the field.

In conclusion it should be pointed

out that this new plant ranges throughout the entire field of natural gas—touching upon hydrates, compression, desulphurization and gasoline extraction, and being the first commercial producer of sulphur. Knowledge gained in this broad laboratory will provide material for many future reports to this convention by the engineers who are closely associated with the work.

## Unique Gas Advertising Series

AN unusual gas advertising campaign designed specifically to describe to 175,000 business executives recent achievements in industrial gas utilization—achievements made possible through radically new manipulations and control of the gas-air combustion reaction—has been appearing in Fortune Magazine on alternate months since July 1943. Sponsored and prepared by Selas Corporation of America, Philadelphia, the campaign uses dramatic full-page scratch-board drawings in two colors with strong copy telling how new skills and

points-of-view have led to outstanding heat-process-improvements of postwar significance.

The inescapable inference of the series is that gas combustion is a precision industrial tool with greater possibilities than generally recognized—when research, development and ingenuity *beyond the bounds of conventional practice* guide its application.

Notable features of the series are: (1) emphasis on the benefits of specializing the equipment to the job, of "fitting the combustion to the function," and (2) a signature panel appearing in each ad to define Selas policy and distinguish the company's operations from the manufacture of standard equipment.

Headlines of the first-year series show the scope of Selas development, and suggest opportunities which may be startling to many gas men:

PRINTING WITH FLAME

LIQUIDS, TOO, CAN BE "HEAT TREATED"

ASSEMBLY BY HEAT

TO TOUGHEN 12-TON CASTINGS INTO ARMOR  
IN CONTINUOUS LINE PRODUCTION

COMPLETE HEATING PLANT YOU CAN HOLD  
IN ONE HAND

INFERNO THEN FLOOD . . . IN THE SAME  
CUBIC FOOT EVERY 55 SECONDS

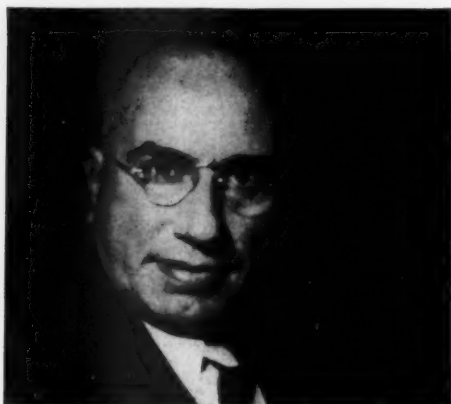
Reprints of the complete campaign may be obtained by writing Harry W. Smith, Jr., Advertising Manager, Selas Corporation of America, Philadelphia, 34, Penna.

## Hope Reduction

THE Federal Power Commission announced June 25 its order accepting new rate schedules filed by the Hope Natural Gas Company, Clarksburg, West Virginia, which reduce interstate wholesale rates for natural gas sold to Ohio and Pennsylvania distributors by \$5,188,703 annually. The schedules filed by the company on April 28, 1944 are effective on all bills based on meter readings made on and after July 15, 1942.



FOR PRESIDENT



*J. French Robinson*

FOR VICE-PRESIDENT



*E. J. Boothby*



*R. H. Hargrove*

FOR TREASURER



*Edward F. Barrett*

# Nominating Committee Reports for 1944-1945



FOR DIRECTOR



*R. G. Barnett*



*John W. Batten*



*Arthur F. Bridge*



*James A. Brown*



*D. W. Harris*

FOR CHAIRMAN

**A**NNOUNCEMENT is hereby made to the membership of the Association, in accordance with Section 2 of Article II of the by-laws, of the following report of the General Nominating Committee which will be presented at the Annual Meeting in Chicago, October 5-6:

*For President*—J. French Robinson,  
President, The East Ohio Gas Company,  
Cleveland, Ohio.

*For First Vice-President*—E. J. Booth-



*C. E. Packman*  
*Accounting Section*



*Harry K. Wrench*  
*Industrial & Commercial Gas Section*



*F. J. Hoenigmann*  
*Manufacturers' Section*



*Charles A. Tattersall*  
*Publicity & Advertising Committee*

by, Vice-President and General Manager, Washington Gas Light Company, Washington, D. C.  
*For Second Vice-President*—R. H. Hargrove, Vice-President, United Gas Pipe Line Co., Shreveport, La.  
*For Treasurer*—Edward F. Barrett, President, Long Island Lighting Company, Mineola, N. Y.

*For Directors—two-year terms:*

R. G. Barnett, Vice-President & General Manager, Portland Gas and Coke Co., Portland, Oregon.  
 John W. Batten, President, Michigan Consolidated Gas Company, Detroit, Michigan.  
 Arthur F. Bridge, Vice-President, Southern Counties Gas Company, Los Angeles, California.  
 James A. Brown, Vice-President, The Commonwealth & Southern Corporation, New York, N. Y.  
 D. W. Harris, Vice-President & General Manager, Arkansas Natural Gas Corp., Shreveport, La.  
 Lyle C. Harvey, President, Bryant Heater Co., Cleveland, Ohio.  
 Norton McKean, President, American Meter Co., Albany, N. Y.  
 Hudson W. Reed, President, The

Philadelphia Gas Works Company, Philadelphia, Pa.  
 Herman Russell, President, Rochester Gas and Electric Corporation, Rochester, N. Y.  
 T. J. Strickler, Vice-President and General Manager, Kansas City Gas Co., Kansas City, Mo.  
 P. S. Young, Chairman, Executive Committee, Public Service Electric and Gas Co., Newark, N. J.

Respectfully submitted,  
 EDWARD G. BOYER, *Chairman*  
 CHARLES B. GAMBLE  
 DEAN H. MITCHELL  
 JOHN VAN NORDEN  
 ROBERT A. RAMSAY  
 A. E. WISHON

General Nominating  
 Committee

**Section Nominations**

The following have been nominated by Section Nominating Committees to serve as Section officers for the next Association year:

*Accounting Section:* For Chairman—C. E. Packman, Middle West Service Company, Chicago, Ill.  
 For Vice-Chairman—E. F. Embree,

New Haven Gas Light Co., New Haven, Conn.

*Industrial & Commercial Gas Section:*

For Chairman—Harry K. Wrench, President, Minneapolis Gas Light Company, Minneapolis, Minn.

For Vice-Chairman—Harry A. Sutton, Assistant General Industrial Fuel Representative, Public Service Electric & Gas Co., Newark, N. J.

*Manufacturers Section:* For Chairman

—Frank J. Hoenigmann, Executive Vice-President, Cribben and Sexton Company, Chicago, Ill.

*Publicity & Advertising Committee:*

For Chairman—C. A. Tattersall, Niagara Hudson Power Company, New York, N. Y.

*Residential Gas Section:* For Chairman

—J. H. Warden, Oklahoma Natural Gas Corporation, Tulsa, Oklahoma.

For Vice-Chairman—J. J. Quinn, Boston Consolidated Gas Company, Boston, Mass.

*Technical Section:* For Chairman—L.

E. Knowlton, Providence Gas Company, Providence, R. I.

For Vice-Chairman—Lester J. Eck, Minneapolis Gas Light Company, Minneapolis, Minn.



Lyle C. Harvey



Norton McKean



Hudson W. Reed



Herman Russell



T. J. Strickler



P. S. Young

**FOR VICE-CHAIRMAN**



J. H. Warden  
Residential Gas  
Section



L. E. Knowlton  
Technical Section



E. F. Embree  
Accounting Section



H. A. Sutton  
Industrial & Commercial Gas Section



J. J. Quinn  
Residential Gas  
Section



Lester J. Eck  
Technical Section



# The Manufactured Gas Situation

- Mr. Hall here presents a stimulating discussion of a few basic factors, the successful solution of which will go a long way toward solving the gas industry's postwar competitive problems. Taken in conjunction with able reports presented at the A. G. A. Joint Production and Chemical Conference and described elsewhere in this issue, it reveals a growing disposition to break with past gas production practice wherever necessary to meet the postwar challenge.
- This paper was presented at the Executive Conference of the Committee for Gas Industry Development of the Pacific Coast Gas Association at Portland, Ore., April 26-27, 1944.

By E. L. HALL

Vice-President and Chief Engineer,  
Portland Gas & Coke Company,  
Portland, Ore.



E. L. Hall

**P**OSTWAR considerations in the gas industry as in other lines of business impel executives to carefully evaluate their manufacturing processes with reference to available raw materials and competitive conditions.

Perhaps the best opportunity for securing additional postwar load will be from space heating. In view of the unfavorable load factor of this business, relative plant investment may become the determining consideration in the choice of manufacturing process.

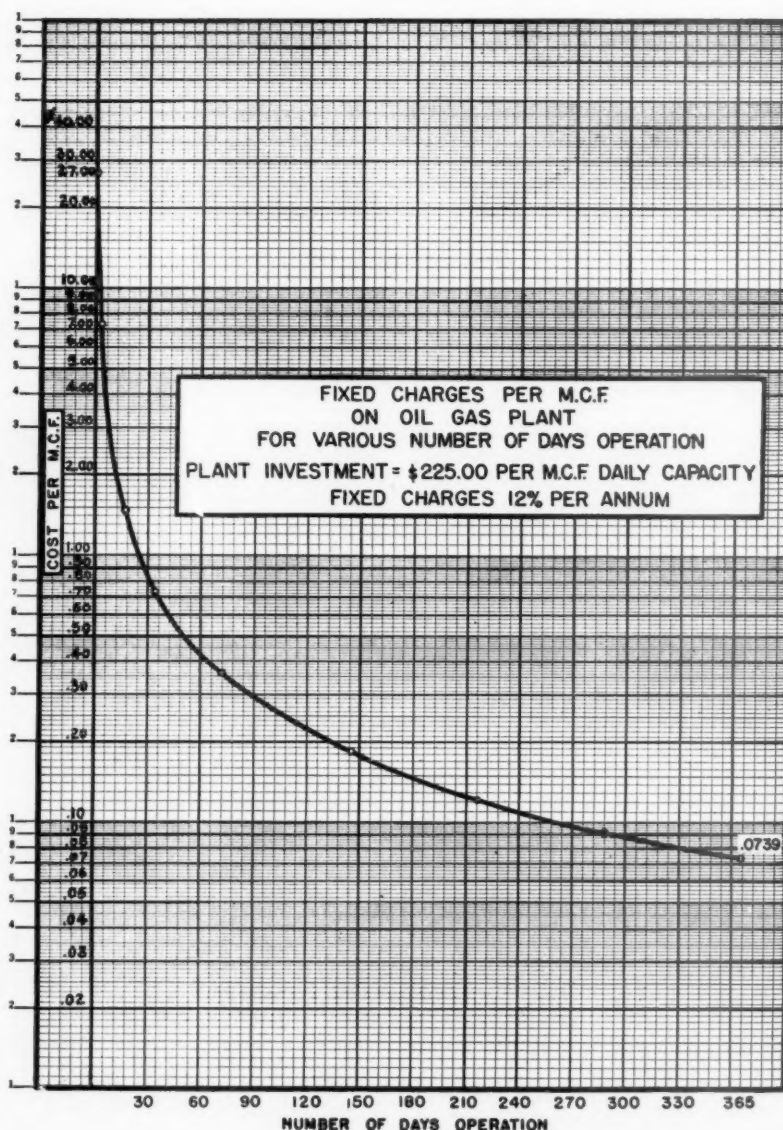
Hence the gas engineer must include in his studies those considerations having to do with seasonal, daily and hourly load factors. The great importance of annual load factor on manufacturing plant investment charges is illustrated by the accompanying chart in which the investment per 1000 cu.ft. of daily capacity is assumed at \$225. With fixed charges for return, taxes and depreciation at 12% or \$27 per

annum, the cost per MCF of annual production is seen to vary from 7.4¢ per MCF for 100% load factor to 37¢ per 20% load factor. For facilities operated only for one day per year, the fixed charges per MCF are \$27!

Comparing an assumed manufacturing cost in the holder of 25¢ per MCF with the above fixed charges per

MCF at various load factors, the relative importance of the latter is very striking.

Load factors affect distribution investment for transmission and distribution mains, consumers' services and meters in a similar way. In this case however hourly capacity rather than daily capacity is the basis.





Climatic conditions in the Northwest are such that with a maximum degree day deficiency of 50—below 65° F. (occurring on the average of five times in a 20-year period) annual plant load factors of 20% are to be expected from space heating load. Since this type of business accounts principally for the unfavorable load factors of the system, most careful consideration must be given to the extent and character of this load and its effect on the choice of manufacturing and distribution investment.

Of the conventional gas-making processes available to the gas engineer,

coal gas ovens and benches are the most expensive to install and consequently the least desirable for peak load service; oil gas and water gas plants are of lesser cost and better suited for such requirements, while butane plants offer the lowest cost for maximum day capacity.

As to the choice of manufacturing processes from an operating standpoint, the cost and availability of raw materials such as coal and oil are local problems. In choosing the raw material, the manufactured cost per therm is influenced to an almost determining degree by the amount and value of by-

products which can be produced and marketed from each kind of raw material. This is true to such an extent that some companies visualize the possibility of putting gas in the holder at a profit. This is indeed the chemical age and progressive gas companies should seek their place in the sun as purveyors of the raw and intermediate materials for chemical industry.

Because of high temperature operation, both coal gas and oil gas plants are producers of the most esteemed of these raw materials—the olefins and aromatic hydrocarbons.

It is beyond the scope of this brief paper to present operating costs for the various processes based on coal or oil, except to illustrate a comparison including both fixed charges and operating costs after by-product credits, all assumptions being based upon hypothetical plants.

The comparison has been made in accordance with the assumptions in the table on the following page.

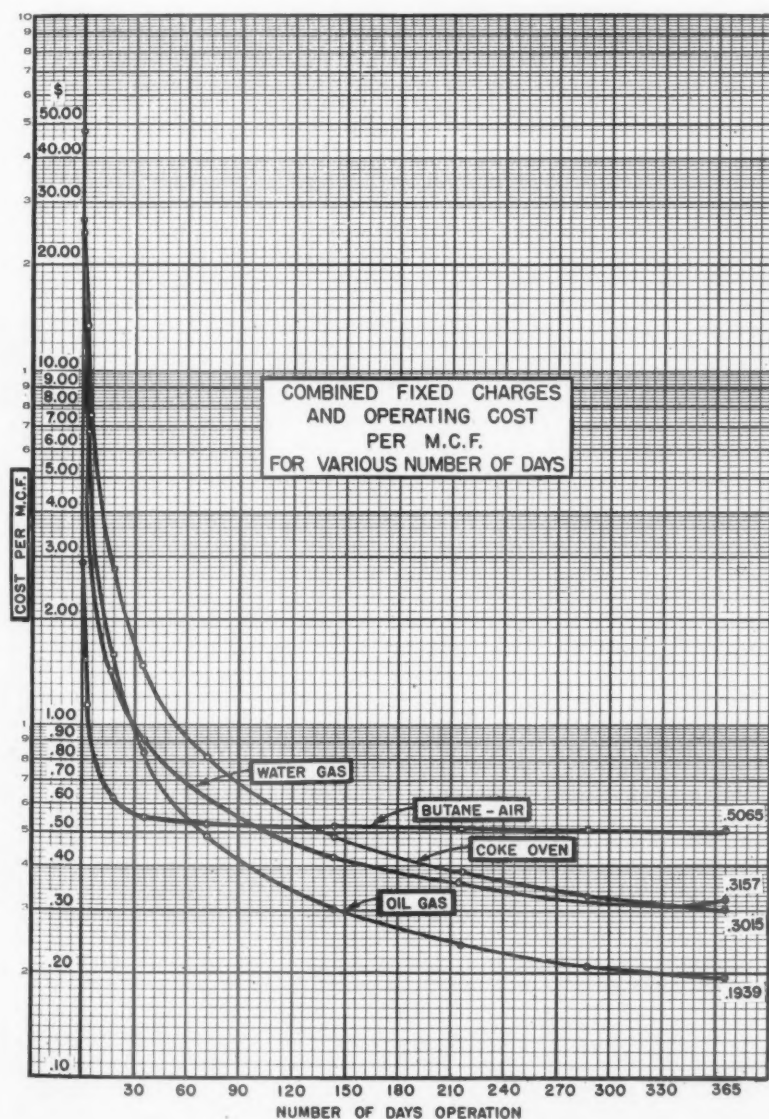
#### Load Factors Determine Costs

It is quite apparent from these figures that load factors will determine the process or combinations of processes which will produce the lowest total cost. The selling price of house heating load may well be influenced to the extent of 11¢ per MCF by the choice of suitable peak load processes and to an even greater extent by by-product credits.

After having prepared a similar study for his local conditions, the gas engineer will then ask himself if the choice will satisfy distribution conditions. In this respect, he will be confronted with two important requirements.

- a) The gas manufactured should give maximum capacity of mains, services and meters in order to minimize distribution investment.
- b) The quality should be such as to give satisfactory utilization in customer's appliances.

As to the requirement under (a), this is best satisfied by a combination of low specific gravity and high calorific value. Requirements under (b) are satisfied principally if the quality served is constant within certain limitations with respect to specific gravity, heating value, flame velocity, etc.



INVESTMENT TABLE

		Coke Oven Gas	Oil Gas	Water Gas	Butane Air Gas
Plant Investment per MCF					
Daily Capacity		400.00	225.00	200.00	20.00
Fixed Charges at 12% per annum		48.00	27.00	24.00	2.40
Cost per MCF Per Year					
365 days @ 100% Load Factor		.1315	.0739	.0657	.0065
288 " @ 80% " "		.1644	.0925	.0822	.0082
216 " @ 60% " "		.2191	.1232	.1095	.0109
144 " @ 40% " "		.3287	.1849	.1644	.0164
72 " @ 20% " "		.6575	.3698	.3287	.0328
36.5 " @ 10% " "		1.3250	.7367	.6575	.0657
18.2 " @ 5% " "		2.6300	1.4794	1.3150	.1315
3.65 " @ 1% " "		13.1500	7.3972	6.5753	.6575
1 " @ .27% " "		48.0000	27.0000	24.0000	2.4000
Operating Cost					
Net Holder Cost per MCF with full By-Product Development		.17	.12	.25	.50
COMBINED FIXED CHARGES AND OPERATING COST					
Cost per MCF					
365 days @ 100% Load Factor		.3015	.1939	.3157	.5065
288 " @ 80% " "		.3344	.2125	.3322	.5082
216 " @ 60% " "		.3891	.2432	.3595	.5109
144 " @ 40% " "		.4987	.3049	.4144	.5164
72 " @ 20% " "		.8215	.4898	.5787	.5328
36.5 " @ 10% " "		1.4950	.8567	.9075	.5657
18.2 " @ 5% " "		2.8000	1.5994	1.5650	.6315
3.65 " @ 1% " "		13.3200	7.5172	6.8253	1.1575
1 " @ .27% " "		48.1700	27.1200	24.2500	2.9000

Difficulties arise principally when blending gases of different character in proportions which vary according to load. Blending coal gas and water gas, or oil gas and butane gas are examples.

The gas engineer who is making his contribution to the postwar planning of his company may well heed the important bearing of poor load factors in his design, caused principally by the seasonal demand of house heating, which while presenting a business opportunity, is also a liability.

Every effort should be made to improve the peaking capacity of plants. In the author's company, oil gas generating capacity has been increased 100% by the use of gas oil. Production and transmission capacity have been increased by butane air gas plants. High pressure transmission line capacity has been greatly benefited by high pressure storage at the ends of the lines.

The liquefaction of natural gas as developed in Cleveland is a noteworthy contribution with respect to providing economical peak load investment. This development may well be integrated with the recovery as by-products of gaseous constituents such

as ethylene, propylene, butylene and even methane, ethane and hydrogen.

The future will belong to those gas engineers and companies who are able to adapt their processes to the needs of the market and to overcome the handicaps presented by certain types of load. Gas engineering needs to be coordinated with sales development.

## Joe Henry Gill Dies



J. H. Gill

a long and distinguished career in the utility industry. He served as a first lieutenant in World War I after spending more than a year in the service of the government directing electrical design and layout of the power equipment for the American Ordnance Base Depot in France.

Since 1935, Mr. Gill has supervised the

JOE HENRY GILL, of Dallas, Texas, president and chairman of the board of Electric Power & Light Corporation, and president of United Gas Corporation, died June 16. He was 57 years old.

Following graduation from the University of Texas in 1910, Mr. Gill had

development and financing of the subsidiary companies of Electric Power & Light Corporation and, in more recent years, has taken important steps looking towards the formation of a system comprising electric utility companies in Arkansas, Mississippi, Louisiana and Texas, as well as the country's largest natural gas system operating in Texas, Louisiana and elsewhere in the southwest.

A brother, Murray F. Gill, is president of Kansas Gas and Electric Co. of Wichita.

## A. G. A. Proceedings Now Available

THE 1943 American Gas Association Proceedings, containing the complete permanent record of the twenty-fifth annual meeting of the Association, October 11-13 at St. Louis, has just been published. In addition to the addresses, papers and discussions presented at the St. Louis meeting, the Proceedings include important committee and research project reports not heretofore available.

This gas man's yearbook includes comprehensive data on vital wartime operations and also reflects the gas industry's growing preoccupation with postwar problems. War production, distribution and supply are dealt with in full measure. There are also important postwar reports on purchasing power and potential markets, competitive factors, research, air conditioning, employment, new vistas for natural gas, accounting procedures, sales responsibility, the revolution in industrial heating, food service equipment, chemical horizons in manufactured gas, gum protective devices and technical operating developments. All phases of the industry are covered and all sections and departments of the Association are represented.

The Proceedings is a valuable ready reference volume for the gas man's library. It contains 436 pages, illustrated, indexed and clothbound. Copies may be obtained at \$3.00 to members; \$7.00 to non-members, by addressing American Gas Association, 420 Lexington Ave., New York 17, N. Y.

## New Homes as Salesrooms

(From address by Arthur P. Hirose before Southern Gas Association Convention)

REMEMBER, new homes have always acted as salesrooms for appliances and equipment that will later find its way into older, existing homes. Often you've seen women and men visiting new homes and later find these families have installed in their own homes some pieces of modern equipment they saw first in new homes. Therefore should not the gas industry set as its goal, a model home program, with these postwar model homes equipped with a full complement of gas appliances, shown to the public as the last word in home equipment?

# Kitchen Planning... School Contest

## Promotes Interest in Postwar Appliances



Prize winners in the high school contest at Kingston, New York. Left to right: Jean McCordle, Doris Remus, Mary S. Motrie, first prize winner

By J. ELLIS BRIGGS

Central Hudson Gas & Electric Corporation

WITH "something different" the aim in setting up a new kitchen planning promotion, the home service department in the Central Hudson Gas & Electric Corporation in Poughkeepsie has perfected a program with the focal point a contest in schools. A community-wide activity was tried out in three of the districts served by this company in the Spring of 1944 as a preview of the campaign for the Fall season.

"Kitchen Planning Now—Means Postwar Jobs" is the theme for the promotion instigated by H. E. Dexter, vice-president in charge of sales. This slogan is important in stimulating a hopeful attitude for the future in the minds of planners to balance the sometimes-felt negative restrictions of wartime conservation of fuel, equipment and food.

At the same time the contest is set under way in the home economics classes in the high schools, the men's service clubs are given short talks and demonstrations on what the program of "Planning Tomorrow's Kitchen" will entail in postwar business, manufacture and employment. The women of the community hear of it through programs in their women's clubs and through a large amount of newspaper advertising carried on simultaneously with the contest.

The article "Plan Your Kitchen—Now" in the May, 1944, issue of the American Gas Association MONTHLY describes the planbook used in the school contest. With this planbook, supplemented with huge posters and displays, explanation is made to the school superintendent by the companies'



Stage set for demonstration before home economics classes in schools. Rita Abbruzzese, home service director, is completing the installation of new equipment in the model kitchen.

Below—Window display at Kingston showing eighteen high school prize winners





local commercial representative as to how the contest can be put in operation. After a demonstration to the school classes by Rita Abbruzzese, home service director, each student enrolling is given a planbook of her own to use in submitting a model kitchen as her entry in the contest. Each contestant also must write a short essay on why she has wanted to change the arrangement in her home kitchen and builds from an original drawing, with cardboard equipment provided in the planbook, a modern kitchen with good working arrangements—stepsaving rather than the one in which Mrs. Stoopover appears.

Enthusiasm for entry in the contest is developed by the use of a kitchen model turned inside out from an old

to a modern arrangement; also by using illustrated charts, and an ingenious electric scoreboard which graphically points out the number of steps saved when some attention is paid to work simplification arrangements.

Eighteen prizes, starting with a \$25 War Bond down to fifteen prizes in war stamps, have provided a real incentive, which brought in 130 completed kitchen models for judging from an enrollment of 250 home economics students in one high school. The winning kitchens were placed on display in the windows of the Central Hudson Gas & Electric Corporation. An interesting sidelight was the interest of the student body in the display, making it necessary to wash the windows daily because of the finger marks.

Gordon King, to secure definite information regarding manufactured gas activities of Association Sections and Committees.

Particular attention centered on postwar technical studies now in progress and it was emphasized that these should be continued and accelerated.

A cardinal point in the new reorganization plan is to provide a method of keeping fully informed of research, particularly in regard to gas manufacturing methods, being conducted by such foreign organizations as the Institution of Gas Engineers in London and its affiliated research groups. Edward J. Tucker, director and general manager, Consumers Gas Company of Toronto, was appointed to study this problem.

There was general agreement that the organization of the Department represented a real forward step. In the words of Col. Hudson W. Reed, president, The Philadelphia Gas Works Co., "the manufactured gas people have a forum to which they can bring their problems for solution—and a body with full responsibility for representing the manufactured gas interests."

## Manufactured Gas Department Holds Organization Meeting



George S. Hawley

**M**EETING for the first time since the reorganization of the American Gas Association into departments devoted to the manufactured and natural gas branches of the industry, the Managing Committee of the Manufactured Gas Department on June 6 discussed the

scope of its work and the organization of the Department. With George S. Hawley, president, The Bridgeport Gas Light Co., Bridgeport, Conn., and chairman of the Department presiding, considerable progress was made toward setting up the framework of an efficient, representative organization for the manufactured gas industry.

It was pointed out by Chairman Hawley that, under the reorganization, the Association now consists of a combination of autonomous departments both having problems for their sole respective consideration; subject, however, to the jurisdiction of the Executive Board and responsible to that body. They are further knit together in the Sections and General Committees of the Association which have valuable information and activities of common interest.

A provision of importance in the new arrangement, Chairman Hawley indicated, is that the chairmen of the Natural Gas and Manufactured Gas Departments are

members of the Association's Finance and Control Committee which passes upon all requests for funds and reviews the budget estimates of the Departments, Sections and Committees.

After considerable discussion by Departmental Vice-Chairman E. J. Boothby, President Ernest R. Acker, Charles F. Turner, chairman of the Technical Section, and others, the following points were brought out:

1. All activities of a jointly manufactured and natural gas nature will remain with the present Sections and Committees.
2. Purely manufactured gas committees, such as the Gas Production and Gas Conditioning Committees of the Technical Section, will hereafter function under the Manufactured Gas Department. However, at least for the time being, the Technical Section will proceed with the organization of these committees for the next Association year.
3. Due to the mutuality of interest and the need for a highly cooperative arrangement between the Manufactured Gas Department and the Technical Section, it was suggested that the chairman of the latter, when a manufactured gas man, should serve as a member of the Department's Managing Committee.
4. The Manufactured Gas Department is represented on the newly organized General Coordinating Committee on Research by D. S. Reynolds, vice-president, Boston Consolidated Gas Company.

Chairman Hawley announced the appointment of a committee, composed of Vice-Chairman Boothby and Secretary A.

## Twenty Manufacturers To Make CP Gas Ranges

**T**HE announcement that the A. J. Lindemann & Hoverson & Company, Caloric Gas Stove Works, Gurney Foundry Company, Ltd., Roberts & Mander Stove Company and Western Stove Company will make gas ranges meeting Certified Performance specifications, brings to 20 the number of manufacturers who will build postwar gas ranges bearing the CP Seal. These 20 manufacturers produced approximately 50 per cent of the 2,300,000 gas ranges made in 1941. In a cooperative campaign, CP manufacturers are pointing out to dealers the profit possibilities in selling gas ranges bearing the CP Seal.

The other manufacturers included in this group are: A-B Stoves, Inc., American Stove Co., Clare Bros. & Co., Ltd., Cribben & Sexton Co., Detroit-Michigan Stove Co., The Estate Stove Co., Glenwood Range Co., James Graham Mfg. Co., Grand Home Appliance Co., Hardwick Stove Co., Moffatts, Ltd., O'Keefe & Merritt Co., Geo. D. Roper Corp., Standard Gas Equipment Corp., The Tappan Stove Co.

## "Gas Light" Tie-in

**C**OINCIDENT with the showing of MGM's picture "Gaslight" in Richmond, Virginia, J. R. A. Hobson, Jr., Director of the Department of Public Utilities, published a newspaper advertisement describing the progress made in gas appliances since gas was first lighted in Richmond in 1803 and used an enlarged reproduction of this advertisement as the main "spot" in an attractive window display.

# Britain's Gas Industry Looks Ahead

THE electrification of Britain during the inter-war years did not bring about a decline in its gas industry. The two grew side by side, though the demand for gas did not rise at the same rate as that for electricity. Electricity went ahead mainly in lighting and power supply and gas progressed chiefly as a heating industry.

Before the war, in 1937, the consumption of gas per head of the population in Britain was 34½ therms, the highest in the world with the exception of the United States. Since 1939, consumption has shown a further increase, mainly the result of heavy industrial demand.

## Quarter Million Employed

Britain's gas industry employs, or directly gives rise to the employment of 250,000 persons. In 1937 it processed 19,400,000 tons of coal and 143,000 tons of oil; some 80 per cent of the heat in the coal was recovered as gas, coke and by-products. It supplied 1,527 million therms of gas for sale, and it produced 12,900,000 tons of coke, and more than 1,000,000 tons of tar, benzole and other chemical by-products. In gas works making over 10 million cubic feet of gas a day, the average cost of manufacture during the five years 1934-38 did not exceed four pence a therm.

The capital invested in the industry amounts to about £238,000,000. Like the electricity industry, the gas industry is operated by private enterprise as well as by municipal undertakings. At the end of 1937, the industry comprised 1,079 undertakings in the hands of 788 owners. The distribution of ownership was then as follows:

(1.) 496 gas companies were independently owned; together they sold 58.9 per cent of the total quantity of gas sold by the industry.

(2.) 310 gas companies were under the control of 19 gas corporations, that is to say holding companies; these contributed 9.5 per cent of the gas sold.

By WALTER HILL

*Assistant Editor, "The Economist"*  
(London)

(3.) 268 gas undertakings were owned by municipalities; these supplied 33.6 per cent of the gas sold.

(4.) 5 gas undertakings were owned by Joint Gas Authorities; these contributed only 1 per cent to total sales.

Some two-thirds of the total sales in 1937 were thus made by the private section of the industry and one-third was supplied by municipalities.

Gas, like other industries in Britain, has established a postwar planning committee. The committee was set up by the British Gas Federation which represents the majority of both company and municipal undertakings, "to collect and collate relevant information, and to consider the steps to be taken by the industry to place it upon such a basis that it can best meet the altered conditions of the future and make the largest possible contribution to national and social welfare."

## Postwar Recommendations

The report of the committee which has recently been submitted to the Government contains these major recommendations:—

First, the committee recommends the establishment of a National Fuel Advisory Council, representative of all fuel industries and of Britain's Ministry of Fuel and Power.

The functions of this Council would be to facilitate the elimination of "wasteful" competition between the various fuel industries in Britain and the substitution of cooperation in the national interest. The committee suggests that one of its first tasks might be "to review the technical and economic factors which operate in the provision of the most nearly ideal heat services—those provided by gas and electricity—having regard to current and prospective improvements in appliances and in the manufacture of gas, the generation of electricity and the transmission of both."

Secondly, a new British Gas Association, representing the industry as a whole, is to ensure its "functional integration" on matters of general policy. The Central Council of the Association—the industry's "parliament"—would be elected by District Councils which, in turn, would appoint committees to study the specific problems in the gas industry. To meet the "imperative" need for the adoption of agreed cost systems and the compilation of general statistics, the British Gas Association will establish a statistical bureau.

Thirdly, the committee suggests a revision of the legislation by which the industry is governed, on the ground that it embodies "anomalies, unnecessary restrictions and discrimination between the fuel industries."

Fourthly, the committee holds that in spite of voluntary consolidation during the inter-war period, the gas industry still consists of too many separate units, it recommends a further measure of integration on present lines rather than by way of nationalization. Hitherto geographical integration has mainly taken the form of

(1.) "the amalgamation or merger of contiguous undertakings, whereby these come under the single management of a company, municipality, or Joint Gas Authority and operate as a single unit, or

(2.) the association of undertakings under a gas corporation whereby the individual undertakings remain separate entities but are subject to the control of the corporation."

So Britain's gas undertakings are looking ahead and planning for their greater efficiency in the postwar world.

## Gas and Penicillin

THE magic drug penicillin is packaged in rooms where the required relative humidity must be 15% and the temperature must be 74° F.—and no foolin'. The highly developed gas-operated dehumidifiers with after coolers, keep these exacting requirements day and night.





By W. D. WILLIAMS

*Public Service Electric and Gas Co.,  
Newark, N. J.*

IN an "order of the day" submitted to all division commercial managers of Public Service Electric & Gas Company, Henry P. J. Steinmetz, vice-president in charge of sales, set in operation this spring, a series of Canning Fairs to be held throughout the New Jersey area served by this company. Commencing with one held in New Brunswick June 6, 7, and 8, the Fairs will continue through August 10. In all, there will be eighteen Fairs.

The Fairs are sponsored by the local newspapers with the cooperation of Public Service—the sponsoring newspaper acting as host for the Fair, as well as featuring it through advertisements and publicity. The advertisements and publicity stories are handled by the publicity department of the utility company working with the newspaper. In addition, a representative of the newspaper opens the first session of the Fair by introducing all the home service consultants who are to conduct the sessions. The awarding of prizes, at the conclusion of the final session, is done by a representative of the newspaper.

All decorations and much of the newspaper advertising is done in the manner of the "Gay Nineties," even to the special invitation folder distributed to women's clubs and other special groups. The stage has a colorful background of gigantic fruits and vegetables, and the accompanying booths are Victorian vegetable stalls with covers of multi-striped awning—the booths devoted to displays of canned

## "Come to the Fair" . . . *Gala Event with a Purpose*

products and canning equipment. Two CP gas ranges are used in each demonstration, and the Canning Fairs are held in auditoriums most available for use, such as high school auditoriums, churches and club headquarters.

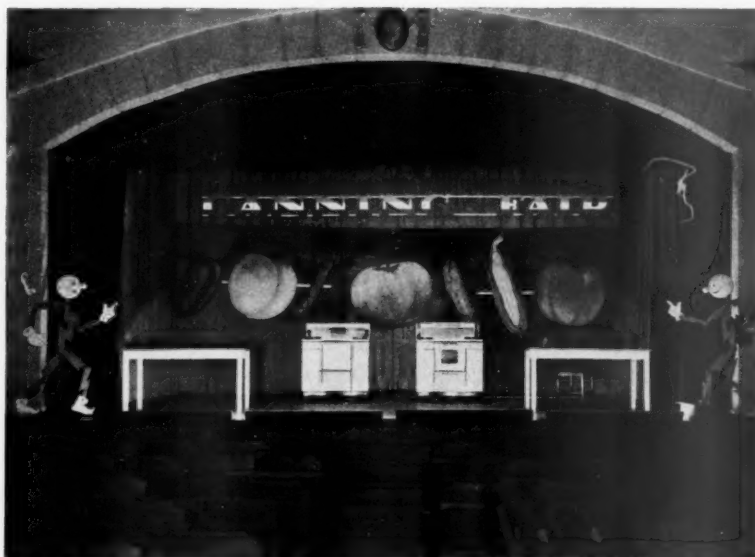
Each Fair is three days in length—two days with the same program of the canning of vegetables and fruits and the making of jams, jellies, and pickles; the third day devoted to such subjects as salting, brining, canning of meat, poultry and fish, and foods prepared for freezing. At each Fair, the home service consultant in her home district does the major part of the program with the assistance of two other consultants. Movies are shown before each session and calliope music is played during the intermission.

The early June issue of the Home Economics News, a six-page folder issued every two weeks through the company to 100,000 homemakers, listed the days of the Fairs so that each customer could adjust her summertime

schedules to attend one of the Fairs.

The only literature used at the Fair is the new 1944 food preservation booklet of Public Service Electric & Gas Company, a 24-page booklet, 9 x 12, beautifully illustrated, with a cover page representing an old-time "sampler." The theme is "Waste Not, Want Not." This booklet contains a large amount of helpful information, including charts showing the time to sow and reap, approximate canning yield of various fruits and vegetables, timetables for preparation and even frozen-food data. It lists canning equipment needed and explains modern processing methods "for an old-fashioned art." A section devoted to canning meat, poultry and fish is also included.

Planning a series of Fairs of this nature required careful attention to preliminaries. A planbook is given to each cooperating newspaper and includes a series of prepared publicity articles, a page of teaser cartoons, and



*Stage set-up for the Canning Fair*



*One of several Victorian vegetable stalls which carry out the theme of the Canning Fair*

a set of photographs, including those of the home service consultants at work in some of the canning procedures. Approximately one month in advance of each Fair, a quantity of posters is distributed by the utility company to local grocery stores and such other suitable places as women's clubs, Red Cross headquarters, and OCD centers for use in windows and on bulletin boards.

The Canning Fairs in the Public Service territory were given a try-out in the 1943 food preservation season and proved very successful. As a result of this activity there was a desire on the part of the newspapers and customers in the area that the program be repeated, as a promotional and co-operative function to aid in the war effort of preserving food for the season ahead.



*A group of interested spectators at the Fair*

## Gas Industry Promotion Program Approved

**F**OLLOWING months of consideration and review the A. G. A. Executive Board authorized the appointment of a Committee on Gas Industry Promotional Development to consider the best means of promoting the interests of the industry through utilization research, production research, promotion, advertising, to implement the recommendations of the Postwar Planning Committee and to restore some Association functions depleted by loss of manpower to the war effort.

The committee, of which President Acker is chairman, met in Chicago on June 21 with a large attendance and canvassed thoroughly the needs of the industry. A tentative plan of action was approved and a small committee was authorized to work out the details and methods of financing and to report to another meeting of the committee to be held in September.

While further details were not announced, it was assumed that the program will be laid before the members at the Annual Meeting in October.

## FHA Praises Gas Industry Cooperation



*Abner H. Ferguson*

**M**ARKING the tenth anniversary of the establishment of the Federal Housing Administration, Abner H. Ferguson, FHA commissioner, in a letter to Alexander Forward, managing director, American Gas Association, on June 29 expressed his appreciation for the co-

operation received from the gas industry as an ally of the building industry. He also made the following significant and noteworthy comment:

"The legislation under which we operate is, as you know, neither compulsory nor regulatory, but entirely of a permissive character. It encourages a voluntary alliance of industry and finance with government on the basis solely of their mutuality of interest.

"So, as I look back upon the past ten years, I like to feel that it has impressively demonstrated that the public interest is well served when, as in the FHA program, the government achieves its objectives by a wholly volitional union with business and finance and where the driving power of private enterprise is preserved intact.

"On the record of what we have accomplished as associates, I am sure we can look forward with mutual confidence to a post-war era of even larger service to the homeowners and prospective home owners of the Nation."

## Enlarged National Gas Advertising Program Has New Copy Theme



H. Carl Wolf

A NEW campaign of national gas advertising was approved May 9 at a meeting of the Committee on National Advertising in French Lick, Indiana, according to announcement made by H. Carl Wolf, chairman of the committee. The opening advertisement in the

consumer series is reproduced on the inside front cover of this issue and a complete description of the industrial and commercial gas campaign appears elsewhere.

National magazines chosen for the consumer campaign are American Home, Better Homes & Gardens, Good Housekeeping, House Beautiful, House & Garden, Ladies' Home Journal, Life, Parents', Saturday Evening Post, True Story and Woman's Home Companion. The schedule also includes nine insertions each in American Builder and Building Age and Architectural Forum. Circulation of the above magazines is 26,000,000 while the number of messages scheduled to appear in them for the new advertising year, July 1, 1944-June 30, 1945 totals 133,000,000.

The new campaign is a definite departure from anything yet done in the eight preceding years of the program. The copy platform setting forth the thinking back of these new consumer advertisements, as de-



President Ernest R. Acker and Vice-President J. French Robinson looking over a blow-up of one of the new national gas advertisements

veloped by McCann-Erickson, Inc., and later approved by the Copy Committee and the Committee on National Advertising, is as follows:

"We are still in the position of having no new postwar gas appliances. While much of the new equipment is considerably further along in the development stages than it was a year ago, it has not yet attained the state where it can be pictured or even described. Moreover, it is doubtful whether pictures of any mechanical devices are sufficient in themselves.

"The 1943-44 campaign of fantasy has served its purpose. This campaign has been widely observed and read, as indicated by observation and readership reports. It has aroused widespread comment in the gas industry—has, indeed, been the most widely discussed campaign in years, and this has been a good thing for the cause of national gas advertising.

"The new campaign marks a distinct change from everything that has been done in gas advertising in the past. Although it still maintains the vitality and interest that will make readers sit up and take notice, the approach is new and different. It still depicts the results of gas service rather than the physical means by which this service is rendered because, in the last analysis, people are more interested in results than in the devices which make these results possible.

"The illustrations are in two colors, which in itself insures greater observation and readership.

"The text has a quality of lightness and good humor that invites reading and holds attention but which, at the same time, gives the reader to understand that gas and gas appliances will offer every feature of modernity and efficiency which postwar America will demand. It also tells enough about what gas service will do in the home to convince readers that a new level of comfort and convenience will be possible in the gas-equipped home of the future. The contrast between the slightly humorous cap-

## CP Gas Range Manufacturers Commend A. G. A. Postwar Appliance Study

AFTER reviewing the preliminary results of the range section of the A. G. A. Postwar Appliance Study being conducted under the chairmanship of F. M. Rosenkrans, The Gas Service Co., Kansas City, the CP range manufacturers went on record to commend the Association for doing an outstanding job. At their meeting in Chicago, May 9, the following resolution was unanimously passed and made a permanent part of the minutes of the meeting:

On the day prior to this CP meeting, the gas range manufacturers were given copies of the recent survey titled "Gas Utility Recommendations for Postwar Gas Appliances, Part I, Gas Ranges and Coordinating Gas Kitchens." This advanced distribution allowed for preliminary study of the survey prior to the CP Range Manufacturers' meeting. All manufacturers present were extremely pleased with the many practical ideas and suggestions set forth for postwar product improvements and were particularly impressed with the thoroughness of the survey. After enthusiastic discussion, a motion was duly made, seconded and unanimously carried for the adoption of the following resolution:

WHEREAS the American Gas Association has conducted a comprehensive market survey regarding desired postwar improvements in gas ranges and,

WHEREAS that Association has made the results of this valuable survey available to gas range manufacturers as an aid and guide in postwar product designs;

NOW THEREFORE BE IT RESOLVED that this expression of sincere appreciation and thanks for this survey be spread upon the minutes of this meeting and that the Chairman of the meeting be, and he hereby is, instructed to furnish copies of this resolution of appreciation to the American Gas Association and to the Committee on New and Improved Postwar Gas Appliances of the Postwar Planning Committee of A. G. A.;

FURTHER RESOLVED that in view of the wide scope and thoroughness of the survey and the many valuable and practical ideas and suggestions for postwar range design and improvements contained therein, each CP range manufacturer will use said survey as a guide and aid in his postwar product development and design work, with particular emphasis and research on flashtube ignition for automatic oven lighting;

FURTHER RESOLVED that present CP Specifications remain unchanged for a reasonable postwar period to allow for the further development, designing, experimentation and ample laboratory and field testing of the major features suggested in the survey;

FINALLY RESOLVED that after a reasonable postwar period of laboratory and field testing, the more successful and practical developments which meet with greatest consumer acceptance be referred to the CP Specifications Committee for consideration as standard specifications for the CP Range of the future.

tions and the specific, down-to-earth messages which accompany these captions gives these advertisements added interest and increases their promotional value.

"The slogan, 'The Magic Flame That Will Brighten Your Future,' has been retained and, in addition, a new over-all theme note has been introduced with the line, 'This Is the House That Gas Runs,' which appears as the main caption in all of the advertisements.

"This advertising is broad in scope and presents the over-all advantages of gas for cooking, water-heating, refrigeration, house-heating and air-conditioning in the modern home. It is the type of advertising that will most greatly benefit the entire gas industry at this time when no new appliances are available and when the industry's productive efforts are being devoted to winning the war.

"This advertising will be carried on during the year 1944-45 until the time when new developments in the industry, such as the Coordinated Gas Kitchen, are at the point where they can be announced to the public. In the meantime we are keeping people sold on gas and gas appliances in anticipation of that day when we can talk more specifically about our products and our service in the postwar world.

"Finally, this campaign is predicated on the one fundamental consideration that all

of our advertising, now and in the future, must aim to put gas in a position of leadership."

Publicity activities will be carried on without any change of pace and the material made available to both newspapers and magazines will feature developments in all five uses of gas in the home.

The new advertisements offer excellent tie-in possibilities. The Bishop Publishing Company will include displays of the first two advertisements in its shipment to be made the latter part of July. Their November-December shipment will include the third national advertisement.

The new series lend themselves particularly well to reproduction in newspaper mat form. In response to suggestions that 3-column mats of national advertisements are too small to give good reproduction results and that an increasing number of newspapers are refusing 5-column mats because of space limitations, one standard size of mat will be made available—four columns wide by about ten inches deep.

To keep the gas industry advised of the progress of the new campaign as well as general developments in the field of national advertising, a series of bulletins is now being planned.

John W. Batten, Michigan Consolidated Gas Co., Detroit, Mich. (Representative—Committee on Industrial Gas Research)  
Everett J. Boothby, Washington Gas Light Co., Washington, D. C. (Representative—Committee on Domestic Gas Research)  
H. D. Hancock, Gas Advisers Inc., New York, N. Y. (Representative—Natural Gas Dept.—Transmission)  
D. P. Hartson, Equitable Gas Co., Pittsburgh, Pa. (Representative—Technical Section)  
Lyle C. Harvey, Association of Gas Appliance & Equipment Manufacturers, Cleveland, Ohio (Representative—A.G.A.E.M.)  
Hall M. Henry, New England Gas & Electric System, Cambridge, Mass. (Representative—Postwar Planning Committee)  
E. L. Rawlins, Union Producing Co., Shreveport, La. (Representative—Natural Gas Dept.—Production)  
D. S. Reynolds, Boston Consolidated Gas Co., Boston, Mass. (Representative—Manufactured Gas Dept.—Production)  
Clarence H. Waring, Wyandotte County Gas Co., Kansas City, Kansas (Representative—A. G. A. Testing Laboratories)

## A. G. A. Research Activities Coordinated



E. P. Noppel

**S**PONSORSHIP of all research activities of the American Gas Association is now in the hands of a Coordinating Committee on Research under the chairmanship of E. P. Noppel, Ebasco Services Inc., New York, N. Y. Organization meeting of this committee was held May 9

at French Lick Springs, Ind., at which time its function was defined and a plan for setting up a general research fund was approved.

Scope of the coordinating body's work was outlined at the time of its creation by the Executive Board as follows:

"This committee shall be requested to maintain a constant review of all Association research and from time to time to make recommendations to the Executive Board for continuing, initiating, discontinuing, enlarging or reducing any and all research undertakings. It shall be especially the duty of this committee to make recommendations on the relative importance of research items to the Finance and Control Committee prior to preparation of the annual budget estimate. The Departments and Sections of the Association shall be requested to contribute to the work of this committee as it may from time to time determine."

Membership of the committee, which in-

cludes representatives of each group concerned with organizing and sponsoring research work, in addition to Chairman Noppel, includes the following:

F. Marion Banks, Southern California Gas Co., Los Angeles, Calif. (West Coast Representative)

### Science Perfects Meter to Ration Flyers' Oxygen

By HOWARD W. BLAKESLEE

**NEW YORK, June 12.—AP.**—The skilled men who make the gas meters for American homes have invented and perfected an oxygen meter for the American army air forces. At some altitudes flyers need a little oxygen, and the amount varies until they must breathe 100 per cent oxygen to survive. They carry the oxygen in high pressure metal tanks, and its flow has to be regulated before a man breathes the life-giving gas.

The job of making a meter or regulator was given to the Cleveland laboratories of the American Gas Association. This meter took on some handicaps which no other meter ever faced.

It had to work in 100-degree temperatures of the tropics and in 70 below zero cold. It had to use some new alloys, something which wouldn't leak right through the pores of the metal when the oxygen was used in the near vacuum of high altitudes.

It had to do a perfect job of fitting the amount of oxygen to men's needs, not only because of their safety, but because any waste of oxygen reduces the length of time a plane can remain at high operating altitudes.



The job took several months from the start of the problem to beginning large-scale production. Testing the finished meters requires both skill and care and this part of the job has been largely turned over to women, who are first given a careful scientific training.

Scores of newspapers carried this AP tribute to the A. G. A. Laboratories

### PERFECTS OXYGEN METER FOR FLYERS

American Gas Association Does Job in 7 Months

**New York, June 10 (AP).**—The skilled men who make the gas meters for American homes have invented and perfected an oxygen meter for the American army air forces.

At some altitudes flyers need a little oxygen, and the amount varies until they must breathe 100 per cent oxygen to survive. They carry the oxygen in high-pressure metal tanks, and its flow has to be regulated before a man breathes the life-giving gas.

**Difficult Task**  
The job of making a meter or regulator was given to the Cleveland laboratories of the American Gas Association. This meter took on some handicaps which no other meter ever faced.

It had to work in 100-degree temperatures of the tropics and in 70 below zero cold. It had to use some new alloys, something which wouldn't leak right through the pores of the metal when the oxygen was used in the near-vacuum of high altitudes.

**Women Workers**  
It had to do a perfect job of fitting the amount of oxygen to men's needs, not only because of their safety, but because any waste of oxygen reduces the length of time a plane can remain at high operating altitudes.

The job took seven months from the start of the problem to beginning large-scale production. Testing the finished meters requires both skill and care and this part of the job has been largely turned over to women, who are first given a careful scientific training.



## H. D. Hancock Heads Natural Gas Technical Research Committee



H. D. Hancock

**A**PPPOINTMENT of H. D. Hancock to the chairmanship of the Technical and Research Committee of the Natural Gas Department was announced recently by J. French Robinson, chairman of the Department. He was made chairman of this important committee following the

resignation of H. C. Cooper who had been chairman for many years.

Mr. Hancock has been a member of the Technical and Research Committee—more familiarly known as the Main Technical and Research Committee, prior to the reorganization of the Natural Gas Department—since the committee was organized in 1920.

He was chairman of the Pipe Line Subcommittee from 1925 until the time of the reorganization and was a member of the Gas Measurement Subcommittee.

As one of the natural gas industry's foremost leaders in natural gas research Mr. Hancock has participated in the activities of the American Gas Association since its organization in 1918. He has been active in gas rate matters, serving as chairman of the American Gas Association Rate Committee and is still a member of this important group. He is now president of Gas Advisers, Inc. with headquarters in New York City.

The following, in addition to Chairman Hancock, are members of the Technical and Research Committee:

Burt R. Bay, Northern Natural Gas Co., Omaha; C. H. M. Burnham, Panhandle Eastern Pipe Line Co., Kansas City; C. U. Daniels, Oklahoma Natural Gas Co., Tulsa; Lester J. Eck, Minneapolis Gas Light Co.,

Minneapolis; D. P. Hartson, Equitable Gas Company, Pittsburgh; R. W. Hendee, Colorado-Interstate Gas Co., Colorado Springs; E. V. Kesinger, Natural Gas Pipeline Co. of America, Chicago; N. C. McGowen, United Gas Pipe Line Co., Shreveport; Wm. Moeller (Jr.), Southern California Gas Co., Los Angeles; J. French Robinson, The East Ohio Gas Co., Cleveland; E. F. Schmidt, Lone Star Gas Company, Dallas; Geo. S. Young, Columbia Engineering Corp., New York.

Subcommittees under the Technical and Research Committee are now being formed and will be announced in a later issue of the MONTHLY.

## Gas Radiant Heating Gains Ground

**R**ADIANT heating, which some architects and engineers affirm will be one of the three or four revolutionary new ideas to be accepted generally by the building industry after the war, had achieved by June 1 nearly a thousand recorded installations in this country, according to L. F. Rains, president of A. M. Byers Company, Pittsburgh wrought iron manufacturers, who have pioneered development of the system.

To demonstrate in simple manner how the system functions, the company is equipping its staff of field service engineers with miniature displays. Sally Kaufman, of the company's engineering service department, is shown below with the first of the new models, duplicates of which are being forwarded to the company's division offices as fast as they are completed.

The house, hinged at the back, can be raised to reveal transparent flooring in which is embedded illuminated tubing. This tubing simulates the wrought iron pipe coils through which, in actual installations, hot water is circulated to convert the entire floor into a heat radiating surface.



Model shows radiant heat system

## Associations in Wartime

(The U. S. Piper—June 1944)

The part played by and the value of technical and industrial associations and societies in time of war are overshadowed by grim and spectacular events. War means action, stress, sacrifice and sorrow; time is of the essence. Everyone is busy; there is little time for reflection. It does not seem amiss, however, to turn out thoughts for a few moments away from the number one job of winning the war to appraise the valuable service such associations and societies have rendered toward the accomplishment of that objective. Volumes could be written if the whole story was told about all of them. Perhaps it would require a volume or more to record the wartime activities of any one of many.

At the outset of the war various industrial associations were called upon by one or more government agencies to furnish data about the capacity to produce their standard products and their ability to expand or convert their facilities to manufacture war material. The existence of such an organization expedited the procurement of potential production data and furnished a mouth piece for the industry in discussions with, and establishment of policies by, government agencies as to how it could most effectively contribute to the war effort.

The American Standards Association, typical of many similar bodies, has done an excellent job in speeding up the completion of many specifications in the interests of standardization. It has also issued many emergency standards for substitute products that could be made with less, or without any, materials that are critically short. Issuance of the NE (National Emergency) Steel Specifications is another good example of how new standards were quickly drawn up and adopted to save many tons of critically short alloys.

Associations representing public utility services such as the American Water Works Association, American Gas Association and Federation of Sewage Works Association have furnished data, advice and technically trained personnel to various governmental agencies. Through their meetings and publications they have kept their members advised of the latest governmental regulations, how to conserve critical materials and at the same time maintain or expand their services to meet the wartime demand. They have also been very active in various phases of post-war planning.

What these associations and societies have accomplished over the years and particularly during more than two years of this terrific conflict should entitle them to some such slogan as—Valuable in peacetime; indispensable in time of war.



# Postwar Personnel Planning

At the March 10, 1944, Southwest Personnel Conference of the American Gas Association a Postwar Planning Committee was appointed by M. V. Cousins, chairman of the conference and personnel director, United Gas Pipe Line Co., Shreveport, with the objective of compiling as much information as possible on this vital problem. The committee is composed of W. H. Senyard, personnel director, Louisiana Power & Light Co., New Orleans, chairman; W. G. Wiegel, Lone Star Gas Co., Dallas; E. A. Werner, Gulf States Utilities Co., Baton Rouge; and P. B. Ezell, United Gas Corp., Houston. This first report of that group was presented at the June 6 Southwest Personnel Conference.

THE committee has been developing and accumulating information and material pertinent to postwar planning so far as personnel problems are concerned. The committee will continue to accumulate material on this subject and make interim reports from time to time.

At this time, the committee would like to call attention to the following material:

1. Copy of Local Board Memorandum No. 190-A, issued May 20, 1944, Subject: Reemployment Policies.
2. Bibliography on Postwar Planning, obtainable from Service on Postwar Information, Time, Inc., New York, April, 1944 (gratis). This is reported to be a "comprehensive bibliography on books and articles on postwar planning placing special emphasis on various phases of postwar distribution."
3. Veterans' Reemployment Plan of International Harvester Company, 180 North Michigan Avenue, Chicago.
4. Practical Guide to Rehiring of Veterans, a special report of the Labor Relations Institute, 1776 Broadway, New York 19, New York. (Copies available to members, available to non-members at \$1.50.)
5. Management Check List, Section 3, April 8, 1944, issue of NAM News on veteran employment problems.
6. Special Aids for Placing Navy Personnel in Civilian Jobs. Prepared by Division of Occupational Analysis and Manning Tables, Bureau of Manpower Utilization, War Manpower Commission, and available from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., at thirty cents each.
7. Special Aids for Placing Military Personnel in Civilian Jobs (enlisted Army Personnel) prepared by Division of Occupational Analysis and Manning Tables, Bureau of Manpower Utilization, War Manpower Commission, and

available in July of 1944 from Superintendent of Documents, U. S. Government Printing Office, Washington, D. C., at a price not yet determined.

8. Retraining War Workers for Peacetime Activities, dated January, 1944, issued by Committee on Education, Chamber of Commerce of the United States, Washington, D. C.
9. Education and Training for Demobilized Service Personnel, dated January, 1944, issued by Committee on Education, Chamber of Commerce of the United States, Washington, D. C.
10. Putting the Disabled Veteran Back to Work, Special Series, Bulletin No. 2, a panel discussion by C. D. Selby, M.D., Col. John N. Andrews, Harley L. Krieger, M.D., A. A. Hendrix, I. Dent Jenkins, available from the Industrial Hygiene Foundation, 4400 Fifth Avenue, Pittsburgh 13, Pennsylvania.
11. Putting the veteran back to work. List of References, Industrial Hygiene Foundation, 4400 Fifth Avenue, Pittsburgh 13, Pennsylvania, March, 1944.
12. Rehabilitation, by A. A. Morey, Industrial Hygiene Section, Safety Engineering, pages 61-68, April, 1944, issue.
13. Planning the Postwar Personnel Program, Executives Service Bulletin, Policyholders Service Bureau, Group Division, Metropolitan Life Insurance Company, 1 Madison Avenue, New York 10, N. Y., January, 1944.
14. Seniority, A Memo to Government, May, 1944 issue, Factory Management and Maintenance, pages 82-88, McGraw Hill Publishing Company, N. Y. (According to publisher—this article will be combined with "The Seniority Tangle" (April) and issued in reprint form at fifteen cents per copy. Address: Editor, Factory, 330 West 42nd Street, New York 18, N. Y.)
15. Reemployment of Veterans, Personnel Series No. 76, American Management Association, 330 West 42nd Street, New York 18, N. Y.



W. H. Senyard

16. Personnel Management in War Industries, Volume II, Bureau of Industrial Relations Bulletin No. 15, University of Michigan Press, Ann Arbor, Michigan.
17. Employing Veterans with Neuropsychiatric Problems, May, 1944, issue of The Conference Board Management Record, National Industrial Conference Board Inc., 247 Park Avenue, New York, N. Y.

## Recommendations

Your committee believes that the pattern for postwar activity should be cut and applied now. We are and will continue to be confronted in a measure with those problems that will face us to a greater extent at the conclusion of the war. Veterans are being discharged from the service at a rate of 80,000 a month. They are more easily assimilated in industry now than they will be at a later date when they return in larger numbers. However, whatever plan is to be developed and placed in use for the postwar period should be developed and placed in use to "get the bugs out of it," and for the benefit of those who are at present returning.

Due to rapidly changing conditions, governmental regulations and court decisions, it is recommended that any

such plan be made flexible to accommodate changes that may develop.

Your committee believes it to be an obligation of each company to point out to returning handicapped servicemen their rights, privileges and benefits to which they are entitled. The above listed material will be helpful.

The supervisors of the respective companies will play a large and important part in the adjustment of the returning serviceman to his job and surroundings. It is urged and recommended that the International Harvester Company's Veterans' Reemployment Plan, Supervisory Training Program be carefully studied in connection with this subject.

It is recognized that in the postwar period each company will be faced with personnel adjustments involving those employees who have replaced other employees in the armed forces. It is believed by your committee that this is a problem requiring individual attention by each company to each specific case and no satisfactory formula can be developed.

Your committee does not believe

that it should at this time suggest a specific postwar plan, even general in its scope, for the use of the respective companies. There are still a multitude of problems that need to be solved before this could be done. However, it is felt that each company could and should take the necessary steps to develop a flexible plan that will meet present-day problems, and into which changes may easily be worked to accommodate future problems in their various complexities. The material listed above should be obtained by each company, if possible, read and studied thoroughly, and where appropriate adapted to the conditions and circumstances of each company.

By means of this interim report, your committee hopes it has stimulated thinking on our postwar personnel problems. Further, it will welcome from the membership of the Southwest Personnel Conference of the American Gas Association any suggestions, recommendations or specific plans relevant to the subject report.

Future reports will be made from time to time.

## Housing Committee Supports Forum's "Complete House," Plan

Last winter Architectural Forum asked several industries, including the gas industry, for an expression of opinion on the "Complete House Plan" which was being developed at that time by the Forum. The plan contemplated gaining acceptance from FHA, insurance companies, savings and loan associations, commercial banks and builders for a proposal to include ranges, refrigerators, automatic laundries and other types of home operating equipment as collateral under the realty mortgage.

The Housing Committee of the American Gas Association has studied this plan in detail and has endorsed the opinions expressed in the following letter which was sent by its Chairman, Leon Ourusoff, to Architectural Forum on April 12:

IT has taken us a while to obtain a cross section of industry opinion on the idea of the 'complete house' sponsored by Architectural Forum through your articles, the Consumer Durable Goods Conference, your extensive exchanges of views with loan and housing organizations and the pamphlet 'Selling the Second Half-Million.'

"It is clear from the opinions received that any legitimate method within reason, devised to stimulate private urban residential construction has the support of our industry, provided that it does not work to the detriment of equipment dealers and that it operates within the realm

of established concepts of property ownership.

"We favor, under these conditions, the inclusion of major household appliances that can be securely attached to real estate by means of piping or rigid conduit so that the services of a licensed individual would be required to connect and disconnect these appliances, thereby attaining a better degree of property protection without substantially interfering with the excellent objectives of the plan.

"With these thoughts, may I transmit to you our best wishes and assurance that we value your efforts on behalf of the building and appliance industries whose interests are closely linked with our own."

## Nationally-Known Gas Engineer Dies



Hilmar Papst

THE nationally known engineer and vice-president, Hilmar Papst, of the Portland Gas & Coke Company, died unexpectedly June 22.

Mr. Papst was born in Germany May 31, 1873. After completing college there he came to this country in 1892, entering the

gas business in 1893 as a cadet engineer in the employ of The United Gas Improvement Company of Philadelphia. In order to learn the gas business from the ground up, he worked as a gas maker's helper at Manchester, N. H., one of its subsidiaries. After a year's work in this station he visited other of their properties to study manufacture and construction. Later he operated, supervised and erected numerous plants in the East, Middle West and the Pacific Coast.

In 1900 he resigned and took charge of the Equitable Gas Light Company in San Francisco and later when the various gas companies there united he was selected as chief operating man and engineer. On May 1, 1906, he was asked to take charge of the Portland company as general manager. Since 1910 he has been its vice-president. He is credited with developing manufacture of the many by-products that has made the Portland concern one of the outstanding plants in the nation.

He was general manager of the Portland Gas Light Company from 1906 to 1910; vice-president and general manager of the Portland Gas & Coke Company, 1910 to 1938 when he retired from active management. He remained in advisory capacity as vice-president. He was responsible for converting the old plant into petroleum manufacture instead of coal gas.

He was a member of the Pacific Coast Gas Association and the American Gas Association.

## Utility Wins National Security Award

FOR outstanding achievement in safeguarding its vital wartime gas and electric services, the Public Service Company of Northern Illinois, Chicago, has been selected by the national board of review of the Office of Civilian Defense to receive the National Security Award. The award, emblematic of proficiency in the protection of employees, plant facilities, and production processes from fire, accident, natural disaster or enemy action, was presented to Britton I. Budd, president of the company, by the sixth civilian defense region of the OCD at a special ceremony.

# Review of Fatal Injuries in the Gas Industry During 1943

## FOREWORD

One of the principal aims of the Accident Prevention Committee of the American Gas Association is to distribute information which will contribute towards the development of safe practices as an integral part of the operating program of the gas industry. The "case histories" discussed in this study present many of the problems which must be solved by the operating personnel of the gas industry, and should prove of special interest and benefit to supervisors charged with that responsibility.

Similar studies have been conducted annually since 1938, and the committee has on file a limited quantity of pamphlets covering fatal injuries from 1938 through 1942. These, together with additional copies of the 1943 survey, are available upon request.

The committee gratefully acknowledges the cooperation of those companies which have made these studies possible. In reporting cases, and in commenting as to corrective measures, they have performed an outstanding service to the employees of the gas industry.

GEORGE J. RUOFF, *Chairman*

By EDWARD R. MARTIN

*Supervisor, Statistical Activities  
American Gas Association*

## I. PRODUCTION

### CASE NO. 1

*Department:* Mfr. Compressor & Storage  
(Butadiene Prod.)

*Occupation of employee:* Gas maker

*Description of accident:* Plant repairman, chief gas maker and four gas makers were preparing to light the pilot of Gas Generator in the regular way by using a torch on the end of a four-foot wire. As the lighted torch was being applied to the end of the pilot burner, a "back-flash" occurred back through the 24" air blast line in which the pilot burner was installed. This back-flash blew out the

brick around the pilot burner and forced gas out around the operator's platform. The burning gas and flying brick caused second and third degree burns over almost his entire head, including scalp, face and neck. Also second and third degree burns of both hands and both wrists. Second degree burns over right thigh and left leg. Autopsy findings reveal extensive rupture of the right lobe of the liver with intra-abdominal hemorrhage, which proved fatal on December 8, 1943.

*Comments:* There were three possible sources from which flammable vapors could have entered the generators—1. Through the natural gas fuel line at the back, or east, side of the generator. 2. From the surface of water in the wash box, backward through the offtake pipe to the generator. 3. From the 36" gas

main, by way of a 3" connection, to the 12" water header and thence into the wash box and through the offtake pipe to the generator. To prevent a recurrence it was suggested that inert gas purging equipment on generators and preheaters and separate safety pilot arrangement be installed; that J-W gas tests of contents of gas generators and preheaters before lighting pilots be taken; that a check list be used before lighting pilots to ascertain if all precautions are taken.

### CASE NO. 2

*Department:* Production

*Occupation of employee:* Coalman

*Description of accident:* After working about seven hours on a very hot day, the employee complained of feeling ill and asked a fellow worker to coal up a water gas set while he went out to get some air. Deceased then went to washroom where he sat down near a window. First aid was administered when it became apparent he was suffering from heat stroke. Employee was removed to hospital where he died two hours later from a cerebral hemorrhage. Coroner's statement of the direct cause of death was "Thermic Fever."

*Comments:* Deceased was a very large man both in height and in weight. His duties on the date of the accident were not arduous and other men doing similar work did not complain. It is probable that the physical condition of the deceased coupled with the weather and the high temperatures in the generator house caused his death. Additional temporary build-

Classification of 8 Fatal Accidents which Occurred Within the Gas Industry During 1943

	Occupation of Employee	Department	Explanation	Case No.
Falling Objects	Driller	Production	Erecting shear poles dead cap came loose striking deceased and throwing him under rig.	5
	Auxiliary Engineer	Transmission	Thawing frozen water pipe in coal pit—went under skip hoist track—struck by counter balance.	6
Explosion	Gas Maker	Production	Lighting pilot of Gas Generator with lighted torch—"back flash" occurred back through air blast line.	1
	Laborer	Transmission	Removing section of pipe in front of closed gate dresser coupled into line. Gate blew off and covered bell hole.	7
Electric Shock	Tar Blender	Production	Inspecting empty tank car—head struck 11,000 volt wire.	3
Cave In	Truck Helper	Production	Getting load of sand from sand pile buried by sand slide.	4
Moving Heavy Objects	Meter Shop Foreman	Distribution	Moving iron case gas meter. Overstrain caused hernia.	8
Miscellaneous	Coalman	Production	Working on very hot day—Suffered "Thermic Fever."	2

ing ventilation was installed and plans are now being made for forced draft ventilation.

CASE No. 3

Department: Gas Plant

Occupation of employee: Tar Blender

**Description of accident:** The deceased, together with chemical engineer, climbed on to empty tar tank car to inspect it and prepare it for release. The engineer, by means of a piece of pipe, started to remove the cover of the tank car to see if main car valve was open or closed. The deceased, who was standing on the barrel of the car with his knees braced against the dome, was helping. He had taken the pipe from the engineer and had twisted it part way around. The engineer was about to take the pipe again and twist it around where deceased could not reach, when the flash occurred. The deceased, who was about six feet tall, apparently hit his head against or brushed an 11,000 volt wire with his cap as he partly stood on the barrel under the low wire. Death, caused by burns and electric shock, was apparently instantaneous.

**Comments:** The accident was caused by the failure of the deceased to properly observe the company rule which requires that all wires are to be considered alive unless known to be dead. Since this accident the company has promulgated the following rule: "When it is necessary to work on top of a railroad car located on an electrified siding, a man must be placed at the power switch at the entrance to the siding so that the overhead wires cannot be energized without warning to the man on the car. This same precaution should be taken by contractors employed by us to do similar work."

CASE No. 4

Department: Plant

Occupation of employee: Truck Helper

**Description of accident:** This employee was sent along with the truck driver to the outskirts of town to get a load of sand from a large sand pile. He had been working only a few minutes when there was a heavy sand slide which buried the deceased employee completely. The driver of the truck was also buried but only up to his shoulders, and after about 45 minutes he was rescued by another man who came to the gravel pit to get a load of sand. However, by that time the deceased employee was beyond help.

**Comments:** Both employees were loading sand from the pile and apparently did not notice the dangerous condition of the sand bank which was almost vertical. Since the accident, instructions have been issued to all truck drivers and helpers that in the event of similar conditions, one man is to stand in the clear so as to help the other employee in the event of a sand slide. We had been

drawing sand from this sand pile frequently during the past year, this sand being used for filling at our plant.

CASE No. 5

Department: Drilling Department

Occupation of employee: Driller

**Description of accident:** Employee, with other employees, was erecting shear poles when bottom guy broke. A snub line was being put on end of shear poles as a safeguard. As employee walked between the shear poles, the dead cap came loose, striking him in the back, throwing him under the rig. Death resulted from compound fracture of right leg, shock, and intercranial hemorrhage.

**Comments:** As all safeguards were provided and used the accident was unavoidable.

## II. TRANSMISSION

CASE No. 6

Department: Compressor

Occupation of employee: Auxiliary Engineer and Electrical Repairman

**Description of accident:** Employee was attempting to thaw a frozen water pipe in coal pit and instead of standing on the side of coal pit, the normal place for such work, he went under the skip hoist track leading into the pit. When he stooped over so he could see the pipe, he was struck by counter balance in the shoulders, knocking him to the ground. Counter balance caught the top of his head on rim of concrete coal pit and sheared off his skull.

**Comments:** Employee failed to stand on either side of the coal pit, the normal

place for such operation, and to avoid future accidents involving the counter balance, such has been covered with a screen guard wire.

CASE No. 7

Department: Pipe Line

Occupation of employee: Laborer

**Description of accident:** Crew in which employee was working was removing a section of pipe in front of a closed gate that was Dresser coupled into the line, and there was 240 pounds of pressure against the gate. The gate blew off and covered the bell hole, which was 10 feet deep, smothering this employee.

**Comments:** 1. Pressure on line was too high. 2. The location of this Dresser coupling was unknown and should have been determined. 3. Bell hole should have been shelved or shored.

## III. DISTRIBUTION

CASE No. 8

Department: Gas Meter Shop

Occupation of employee: Meter shop foreman

**Description of accident:** Was moving a 250-B iron case gas meter on a concrete floor, by sliding it along floor and turning it. Felt pain in right groin—meter weighed between 500 and 600 pounds. Sustained bilateral inguinal herniae and was operated upon on October 19, 1943. Hernia properly healed but a pulmonary embolus developed which resulted in his death on November 6, 1943.

**Comments:** By overstraining himself in moving a heavy meter. Could have been avoided by having more help in moving meter, or by using a truck.

# Southwest Regional Personnel Conference



M. V. Cousins

**C**ONTINUING the policy of holding regional meetings adopted last year, the Southwest Personnel group sponsored by the American Gas Association held its fifth meeting on D-Day, June 6, at the Washington-Youree Hotel, Shreveport. Appropriately, a considerable part of the discussion centered on such subjects as payroll allotment plans for the purchase of War Bonds, the re-hiring of men returning from military service, as well as on postwar personnel planning. Published elsewhere in this issue is a separate progress report dealing with the latter problem prepared by a committee headed by Howard Senyard, di-

rector of personnel of the Louisiana Power & Light Co.

Under the able leadership of M. V. Cousins, personnel director, United Gas Pipe Line Company, a score of representatives of Southwest utility companies took part in the conference. At the opening of the meeting it was decided to hold the next conference in Shreveport on August 29, 1944.

Chairman Cousins inaugurated the session with a brief discussion of recent national labor trends, with particular reference to War Labor Board rulings. He gave his opinion that the War Manpower Commission's priority referral program was the most important new regulation.

Kurwin R. Boyes, secretary, American Gas Association, outlined the underlying purpose of the regional meetings and complimented Mr. Cousins on the constructive work accomplished to date. He indicated that the Natural Gas Distribution Job Classification Manual, prepared by the



group, was being used to good advantage, throughout the industry, and commended its effective work on Sound and Tested Going Rates for distribution and transmission employees.

A valuable report on Employee Benefit Programs, based on a recent survey, was presented by Robert G. Kenan, Southern Natural Gas Co., Birmingham, Ala., chairman of the committee devoted to that subject.

Other topics reviewed at the meeting included: recent changes in Selective Service regulations, new developments in the unionization of employees, the awarding of service pins, value of suggestion systems, and application payroll allotment plans.

## Houston Drivers Chalk Up Perfect Record

**C**HALKING up a perfect record by virtue of not having a single chargeable accident within the past year, all 58 employees of the Houston Natural Gas System who operate commercial vehicles were accorded recognition in June for their outstanding achievement in safe-driving.

The feat not only marks the first time in the company's history that an entire year has gone by without a mishap, but is even more remarkable when it is considered that the men who sit behind the steering wheels of Houston Natural's commercial vehicles have now driven more than one million miles without an accident.

A meeting of all Houston warehouse employees was held Friday morning, June 1, at which time 27 drivers were presented with certificates of award, with 12 of this group receiving an additional cash token for having driven six or more years without an accident.

Presiding at the meeting was Director of Safety R. M. Hutchison.

## Sell the Complete Gas Kitchen

(From address by Arthur P. Hirose before Southern Gas Association Convention)

**F**ORTUNATELY a movement is on foot to advertise and promote the coordinated gas kitchen, when the war is over. This is an excellent idea that you should support, advertise and promote up to the hilt. It is bound to result in extra sales of gas ranges, gas refrigerators, gas water heaters for kitchen installation and indirectly in the sale of gas heating and air-conditioning equipment for the home. When you sell the idea of an entire new kitchen to women, you give them a goal to shoot at—something to which they can aspire—something they can plan for and achieve.

But if you advertise and promote the coordinated gas kitchen idea the gas industry will at least get its share of the postwar range refrigerator and water heater business.

## HOW AMERICA COOKS...

34,342,311 occupied dwellings reported cooking fuels used.  
U. S. DEPT OF COMMERCE  
BUREAU OF CENSUS, 1940

WOOD



COAL AND COKE



OILS  
(Kerosene & Gasoline)



ELECTRICITY



GAS



Each symbol represents two million homes



PICTOGRAPH CORPORATION

## Miss Pepler Heads New Home Service Unit

**A** HOME SERVICE DEPARTMENT to assist residents of Iowa City and Johnson County with canning, nutrition, rationing, lighting and other problems has been established by the Iowa-Illinois Gas and Electric Company, according to George M. Sheets, sales supervisor.

The new department will be headed by a graduate Home Economist, Norma Pepler, who holds both a B.A. and a M.A. degree from the State University of Iowa.

Miss Pepler has had several years of teaching experience in her field. She has been a member of the faculty of the Iowa City High School as instructor in home economics for several years. Previously she taught in Baltimore, Md.

Officers of each vessel. Departmental organizations also developed along ship lines in turn furnish the ship commanders with important information.

Principals in guiding the contest to its successful goal are J. P. Pulliam, Wisconsin Public Service Corporation, president and Naval Chief of Operations of the contest, and his principal assistant Safety Commander C. H. Hansen.

## Lone Star Gas 35th Anniversary

**L**ONE STAR GAS CO., headquarters in Dallas, Tex., celebrated its 35th anniversary on June 1. The company was organized on June 1, 1909, and constructed the first natural gas line to carry natural gas over long distances in Texas. The first line built by Lone Star was constructed at Petrolia, Texas, and was 135 miles long, bringing gas from that field to Fort Worth and Dallas, supplying about 15,000 consumers.

In 35 years the company has grown to more than 5000 miles of main lines carrying gas from 1200 wells located in 75 fields and serving more than 325,000 customers. Lone Star is responsible for the fuel requirements of more than a million and a half people residing in central and northeast Texas and southern Oklahoma.

## A. G. A. E. M. President

**I**N announcing the election of Lyle C. Harvey as president of the Association of Gas Appliance and Equipment Manufacturers the June A. G. A. MONTHLY indicated that Mr. Harvey had taken office. This was incorrect as the A.G.A.E.M. fiscal year begins in October and Col. Willard F. Rockwell continues to hold the presidency until that time.

## Safety Contest Nets Accident-Free Month

**T**HE month of May saw an accident-free record chalked up for all departments of the Wisconsin Public Service Corporation, this being the first month of their "Supply Line Safety Contest" competition. This competition will take all employees of the Wisconsin Public Service Corporation from their home in the Great Lakes territory to Calcutta, India by way of routes marked out on a large map of the Pacific Ocean posted on all safety bulletin boards.

Ships representing the power system, valley division, Menominee-Marquette division, Sheboygan-Manitowoc division, Green Bay division, and Oshkosh division, had reached the Mid Pacific at the end of the first month of a three months' outbound voyage. The ships move approximately 500 miles a week, the safety progress being reported by weekly communiques signed by the commanding of-

## New Division of Lone Star Gas

A NEW division of Lone Star Gas Co., headquarters in Dallas, Texas, has been created with Fort Worth as the central division office, it has been announced by Chester L. May, vice-president of the company. The change brings into the Fort Worth division 20 additional towns in the company's Arlington and Bowie, Texas, districts, which formerly have been operated under other divisions.

## "Bob" Hlavin Decorated and Promoted

CAPTAIN ROBERT T. HLAVIN, former inspector for the American Gas Association Testing Laboratories, now staff officer of the Thirty-seventh Division, has been awarded the Bronze Star for "outstanding service" in the South Pacific. Public announcement of this decoration by the War Department preceded only by a few days a personal message that he had also been promoted to Captain.

Captain Hlavin's citation revealed for

the first time that as Aide de Camp to General Robert S. Beightler he showed "unusual ability" in handling transportation and supply problems throughout the New Georgia and Solomon Islands operations as well as in meeting tactical problems that followed.

Enlisting in February, 1941, as a private, "Bob's" promotion has been rapid. He went overseas in May 1942 and while in the Solomon Islands was one of the first officers to be graduated from Officer's Candidate School as Second Lieutenant.

## E. H. Rohrer Succeeds John Keillor

E. H. ROHRER has been appointed gas engineer of the B. C. Electric Power and Gas Co., Ltd., Vancouver, succeeding John Keillor, whose retirement was announced recently. Mr. Rohrer assumes full charge of the gas department with the title of manager.

A native of Lancaster, Pa., and graduate of the University of Pittsburgh, Mr. Rohrer has had wide technical experience, including five years with Carnegie Steel Co., some years with Koppers Co. operating new

gas plants, and 16 years with Montreal Coke and Manufacturing Co. He joined B. C. Electric on Mar. 16, 1944.

Mr. Keillor retired on Mar. 15 after a long and distinguished career. He is the founder of the Canadian Gas Association with which organization he has been closely associated for more than 37 years. He was honored at the recent annual meeting of the Canadian gas men when he received a gold-banded cane and an engrossed token of appreciation.

## Mrs. Copeland Home Economics Director

MRS. EDNA MILLER COPELAND has been named home economics director of the Monongahela West Penn Public Service Company with headquarters at Fairmont, W. Va.

Mrs. Copeland is not new to company circles, having been employed to conduct special surveys and perform other duties over the last three-year period. Prior to accepting the directorship of home economics she was a teacher of that subject in Fairmont West Side High School for many years. She holds a bachelor's degree in home economics from West Virginia University and a master's degree from Columbia University.

## British View of American Homes

(The Gas World, London, April 22)

Miss Jane Drew, F.R.I.B.A., the consulting architect to the Domestic Heat Services Committee of the gas industry, made her first statement on her return from America at a meeting of the north-west district of the British Commercial Gas Association at Radiant House, Liverpool, on April 12. Those present included architects, town planning and housing officers of local authorities.

Miss Drew's visit to America was for the purpose of studying housing conditions, with special reference to kitchens and heating systems. She gave a lucid description of their application to British postwar homes. Miss Drew said that in America she was impressed by the enormous volume of research and technical improvements in equipment. Over there they considered efficient and technically well-designed equipment in the home not as a luxury, but as an essential. This equipment was built in as part of the house, and on the whole the Americans spent much more on equipment rather than upon the structure of the house. It was obvious that on the whole American housewives had better physique than their English sisters, and the standard of cleanliness and comfort in their homes was far greater than ours. It was certain, she said, that American women enjoyed washing, washing-up and cooking on the whole more than the British.

On the question of the economy factor of improved kitchen planning, Miss Drew said that by considering the equipment as an integral part of the structure greater economy can be effected, as, for instance, in pipe lines and heating due to the placing of equipment, while the insulation value of a structure should be considered coordinately with the cost of heating.

Miss Drew said American gas-operated refrigerators were in a special field in war-time; unlike the electric motored refrigerator, it had no parts which went wrong. There was a great deal of interest in co-ordinated kitchen planning in which design of the fittings, cupboards, and everything else was considered as one, while complete and efficient plumbing units were being used in prefabricated houses. She was convinced that proper heating, cleansed air, hot water and appliances like good washing machines and refrigerators were really "life savers." The Ministry of Fuel and Power, she said in conclusion, were supporting an application from the gas industry to import from America these appliances, which would be helpful to this country and from which our home designers and industries might gain many helpful ideas. It was proposed to show these appliances at an exhibition of up-to-date kitchen planning which the gas industry was proposing to hold in London some time in the future.

## Rotary Names Tucker

EDWARD J. TUCKER, director and general manager of The Consumers' Gas Company of Toronto, has been elected president of the Rotary Club of Toronto. Mr. Tucker is a director of the American Gas Association.

## CONVENTION CALENDAR

### AUGUST

Aug. 29 American Gas Association Southwest Personnel Conference  
Shreveport, La.

### SEPTEMBER

Sept. 13-14 Pacific Coast Gas Association, Annual Meeting  
Ambassador Hotel, Los Angeles

### OCTOBER

Oct. 3-5 National Safety Congress  
Sherman, Morrison & LaSalle Hotels, Chicago, Ill.  
5-6 American Gas Association, Annual Meeting  
Stevens Hotel, Chicago, Ill.

# Personal AND OTHERWISE

## Smith Appointed A. G. A. Natural Gas Director

**G**EORGE H. SMITH, chief of the Gas Materials Section, Office of War Utilities, War Production Board, has been appointed director of the Natural Gas Department of the American Gas Association, effective August 7, and will be an assistant managing director of the Association. The announcement was made by Alexander Forward, managing director of the Association and J French Robinson, chairman of the Department and vice-president of the Association.

Mr. Smith, a B.S. in civil engineering, in recent years has been in charge of passing on applications for priorities submitted by natural gas and manufactured gas companies, both domestic and foreign. Eighty per cent of the cost of these projects was represented by the natural gas industry. His counsel and advice have been continually called upon in connection with the issuance of limitation orders and other forms of wartime control. In addition, his duties in Washington have afforded him the opportunity to become familiar with nation-wide problems of the gas industry and he is well known to the staffs of other Government agencies, including the Fed-

eral Power Commission and the Securities and Exchange Commission.

Following fifteen years of gas utility operating experience, Mr. Smith became associated with the Empire State Gas and Electric Association, composed of members from natural gas, manufactured gas and electric utilities. He was managing director of that association for eight years.

## James A. Brown Heads Indiana Utility



James A. Brown

**J.** A. BROWN, a vice-president of the Southern Indiana Gas and Electric Company, has become president, succeeding William H. Barthold who resigned on account of poor health. Mr. Brown has been associated with the operations of the company since its organiza-

tion 32 years ago and also has been connected for a long time with other utility companies which are now a part of The Commonwealth & Southern system.

Mr. Brown is a director and chairman of the Finance and Control Committee of the American Gas Association. He has been active in A. G. A. affairs for many years.

## Boss of the Boss

**W**HO bosses the boss? Over at the Peoples Gas Light & Coke Co. almost anybody knows that it's an energetic 6-year-old named Elliott Ranney Donnelly, whose father is Lt. Gaylord Donnelly, Pacific naval veteran, and whose grandfather is none other than the chairman of the P.G.L. board.

Others may approach the sixth-floor executive offices with an air of discretion, but not young Elliott, who rushes past the open door with impunity, climbs up on the chairman's knees and proceeds to behave like any normal juvenile of that age.

Moreover, Chairman George A. Ranney likes it.

## Potter Directs Coordinated Gas Kitchen Program



H. Vinton Potter

**H.** VINTON POTTER, general sales manager, Fall River Gas Works Co., Fall River, Mass., will join the American Gas Association July 1 as coordinator of the efforts of the manufacturers and utilities in developing the Coordinated Gas Kitchen Program sponsored by

the Association's Postwar Planning Committee.

In his new affiliation Mr. Potter succeeds C. V. Sorenson, chairman of the Association's Residential Gas Section, who since February has devoted his time to promoting interest throughout the gas industry in the coordinated gas kitchen program.

A special committee under the chairmanship of John H. Warden, vice-chairman of the Residential Gas Section and sales manager of the Oklahoma Natural Gas Company, Tulsa, Okla., has charge of the promotional aspects of this program.

A graduate of Brown University, Mr. Potter joined the Blackstone Valley Gas & Electric Company as salesman in 1926, and advanced to the position of merchandise manager. He resigned from the company in 1937 to go to the Oklahoma Natural Gas Company where he served as merchandise and advertising manager, coordinating dealer activities in concerted sales drives and supervising the company's institutional advertising.

In 1940 he joined the Fall River Gas Works Company in his present capacity as general sales manager. Mr. Potter has been active in gas association committee work. He has been a member of the A. G. A. Refrigeration and Water Heating Committees as well as New England regional director of the Certified Performance range campaign. This year he was elected chairman of the sales division of the New England Gas Association.

## Davidson To Direct Fall River Sales

**J.** AMES L. DAVIDSON has been named sales manager of the Fall River Gas Works Co., Fall River, Mass., succeeding H. V. Potter who has joined the American Gas Association's staff.

Mr. Davidson has been identified with Stone & Webster companies since 1926—first in Virginia and then at the Blackstone Valley Gas & Electric Co. in Pawtucket, R. I. From there he went to New York where recently he has been associated with the rate department.



George H. Smith

## Barthold Retires



Wm. H. Barthold

**CHAIRMAN** William H. Barthold of the board of directors of the Central Illinois Light Company and president of the Southern Indiana Gas and Electric Company, resigned from these offices effective June 1 but continues as a director. He has been in poor health for

some time.

Mr. Barthold is well known in the public utility field. He became an officer of the Central Illinois Light Company upon its organization in 1913 and of the Southern Indiana Gas and Electric Company when it was organized in 1912.

He first entered the utility business in 1896 when he entered the employ of the Grand Rapids Gas Company of which he became superintendent two years later. Subsequently he became connected with the Consumers Power Company in an executive capacity and continued to serve for 43 years with companies comprising what is now The Commonwealth & Southern Corporation. Mr. Barthold's long, active career entitles him to a well-deserved rest.

## On Republic Natural Board

**E. L. DEGOLYER** and **Lewis W. McNaughton** of Dallas have been elected as members of the board of directors of Republic Natural Gas Co., headquarters at Dallas, Texas, according to announcement by **W. H. Wildes**, president of Republic Natural. **Frederick M. Mayer** and **Mr. McNaughton** were named new members of the executive committee of the company.

## Dr. Sebastian Joins Gas Institute Research Staff

**DR. JOHN J. S. SEBASTIAN** has been appointed to the research staff of the Institute of Gas Technology at Illinois Institute of Technology, it has been announced by **Prof. John I. Yellott**, director of the institute.

Dr. Sebastian will serve as associate supervisor of the coal and gasification research section. He will be in general charge of research on fluidized gas generation, upgrading of low B.t.u. gas, and related projects.

He has had 18 years' experience in research work, 11 years of it as research associate in the coal research department at Carnegie Institute of Technology. Earlier in his career he worked as research engineer for the Koppers Company at Mellon Institute, Pittsburgh, Pa., and as as-

sistant chief chemist for the Interlake Iron Corporation, Chicago.

Immediately prior to his appointment, Dr. Sebastian was general manager of the Balsam Mining and Manufacturing Company, Inc., Waynesville, N. C.

Dr. Sebastian is a graduate of the Royal Polytechnic Institute of Budapest. He received his doctor of science degree at Carnegie Tech. He is a member of the American Chemical Society and Sigma Xi.

## 14 A.G.A. Engineers Active on Fighting Fronts

**WITH** the invasion of Europe from England well under way and fighting on all fronts increasing, a check of the 51 former engineers of the American Gas Association Testing Laboratories now in the armed services discloses that at least 14 are actively engaged in combat land or sea operations. Eight are in the European area, 3 in the Pacific, and 3 on the high seas.

In the European Theater are Major Edward T. Othman, Captain John D. Martin, Lieutenants Carl F. Geltz, Frank E. Hodgdon, Don F. Leverett, and Howard L. McPherson, Private John Gallo and David G. Willich T/5. Major Othman and Lieutenant Geltz are in engineering units. Captain Martin is attached to amphibious tank forces. Lieutenant Leverett is a specialized training instructor and has been on several fronts.

Captains Charles G. Allen and Robert T. Hlavin along with Lieutenant Frederick C. Johnston are in the Pacific zone. Captain Allen has been in England, Africa, Italy, and India while Captain Hlavin was recently awarded the Bronze Medal.

On the high seas are Navy Lieutenants Howard C. Clark, Walter E. Gay, and Frank E. Pryatel. Clark and Gay have been on Atlantic convoy duty and also saw action in the Casablanca engagement.

At home, word comes that Major Bruce A. McCandless of the field artillery is on sick leave while Lieutenant Commanders Robert B. Kleinhans and John B. Heinicke are instructors at Annapolis.

## Wehe Advanced

**ROY A. WEHE** has been appointed assistant director of Public Utilities of the California Railroad Commission. In this position, the assistant director is normally responsible for the planning and conducting of major formal and informal rate investigations of gas, electric, telephone, telegraph, and water companies, and for other special investigations as assigned.

Mr. Wehe has been employed as an engineer on the Commission's staff since 1923, and since January 1, 1937 has been gas and electrical engineer for the Commission.

## Appoint Natural Gas Committee Chairmen

**APPOINTMENT** of the following as chairmen of important A. G. A. Natural Gas Department committees has been announced by **J. French Robinson**, chairman of the department:

Transmission—**E. V. Kesinger**, Natural Gas Pipeline Co. of America, Chicago, Ill.  
Production and Storage—**E. L. Rawlins**, Union Producing Co., Shreveport, La.  
Large Volume Sales—**J. H. Gumz**, Pacific Gas & Electric Co., San Francisco, Calif.  
Accounting—**Leith V. Watkins**, Panhandle Eastern Pipe Line Co., Chicago, Ill.  
Nominating—**R. E. Wertz**, Amarillo Gas Co., Amarillo, Texas  
Supplymen's Fund—**E. F. Schmidt**, Lone Star Gas Co., Dallas, Texas  
Time and Place—**R. H. Hargrove**, United Gas Pipe Line Co., Shreveport, La.

Mr. Robinson also announced that **H. D. Hancock** has succeeded **H. C. Cooper** as chairman of the permanent Technical and Research Committee. Mr. Hancock's committee personnel is listed in a separate article in this issue.

## Gas Institute Names Lerch Chairman

**FRANK H. LERCH, JR.**, president of Consolidated Natural Gas Company, New York, N. Y., has been elected chairman of the board of trustees of the Institute of Gas Technology, Chicago. He succeeds **Frank C. Smith**, president of the Houston Natural Gas Co., Houston, Texas, who has held that post since the Institute was organized.

## Dr. Fieldner Receives Honorary Degree



Dr. Fieldner

**ARNOLD C. FIELDNER**, chief of the Fuels and Explosives Service, U. S. Bureau of Mines, Washington, D. C., received the honorary degree of Doctor of Science from his alma mater, Ohio State University at its Spring convocation on June 3.

Dr. Fieldner has made many notable contributions to fuel technology. This most recent honor follows by little more than two years the award of the 1942 Melchett Medal to Dr. Fieldner. The Melchett Medal, an award of the Institute of Fuel in England, is made annually for outstanding achievement involving the scientific preparation and use of fuel.

He is an active member of the Technical Section of the American Gas Association.



## Stevens Honors Klumpp

**J**OHAN B. KLUMPP, consulting engineer of Philadelphia and past president of the American Gas Association, received the degree of Doctor of Engineering from Stevens Institute of Technology at Commencement exercises on June 27.

Mr. Klumpp is nationally known as a consulting engineer in the manufacture of gas and has participated in the planning and operation of gas plants in many American cities. He has also served the U. S. Bureau of Standards in setting up gas standards, representing the American Gas Association and the former American Gas Institute.

During the first World War, he was consultant of the Council of National Defense. He went to Philadelphia as consulting engineer of utilities in 1939.

He received this high honor on the fiftieth anniversary of his graduation from Stevens.

## Paige Heads Postwar Planning Program

**A** COMMITTEE for Economic Development for Brooklyn is being set up to direct the borough's participation in nationwide business preparations for postwar industrial reconversion, the Brooklyn Chamber of Commerce announced recently.

Head of the program will be Clifford E. Paige, president of The Brooklyn Union Gas Company and chairman of the chamber's Postwar Management Problems Committee.

## President of National Sales Executives



George S. Jones, Jr.

**G**EORGE S. JONES, JR., vice-president in charge of sales at Servel, Inc., was elected president of the National Federation of Sales Executives recently in their second wartime conference at the Edgewater Beach Hotel in Chicago.

Mr. Jones, who has served on the board of the Federation for several years succeeds Harry C. Anderson of the A. B. Dick Company of Chicago, who became chairman of the board.

In 1922 Mr. Jones, a graduate of Georgia Tech, became associated with the Georgia Power Company of Atlanta, Georgia. In 1924 he resigned to become sales manager of the Texas Power and Light Company in Dallas, and a year later was made assistant general manager of the Dallas Power and Light Company.

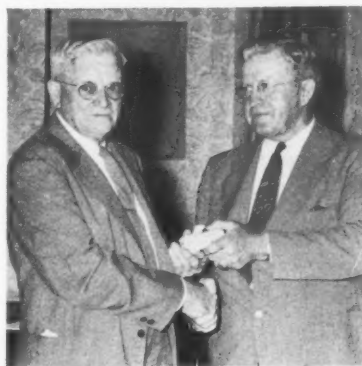
After nine years in the public utility business, Mr. Jones resigned as assistant general manager of the Dallas Power and

Light Company to be regional manager for Frigidaire Corporation in the Southwest. In 1933 he became associated with Servel, Inc., as regional manager at Dallas.

In 1936 Mr. Jones was appointed vice-president and general sales manager for Servel, and since that time he has been located in Evansville, Ind.

In addition to his position as president of the National Federation of Sales Executives, Mr. Jones is active in the affairs of the American Gas Association, the Association of Gas Appliance and Equipment Manufacturers, and the National Association of Manufacturers.

## 50-Year Veteran Honored by Iowa Utility



Joe B. Burge, "Number One Old-Timer" of the Iowa Public Service Co., is shown at left receiving his 50-year service button from H. M. Smith, assistant general manager, an employee of the company for 38 years

**T**WENTY-SIX employees who have been with the Iowa Public Service Co., Waterloo, Iowa, more than 30 years—one of them, Joe B. Burge, being a 50-year veteran—were honored at a dinner June 1 tendered them by their company.

Mr. Burge, foreman of the gas meter shop, received his 50-year pin from H. M. Smith, assistant general manager, who himself has been an employee of the company since Jan. 1, 1906.

Mr. Burge has been employed continuously by the Waterloo Gas & Electric Co., and its successor, the Iowa Public Service Co., since May 30, 1894, when he started by digging ditches for pipe, reading meters, installing appliances, attending to service complaints, and caring for 27 carbon arc lamps.

During the first few years he was in charge of lighting and turning out the 115 fish-tail burner street lamps which, in his own words, "were operated by moonlight."

The group attending the dinner organized a Thirty-Year Club, to which all employees of the company with long service will be admitted.

Officers of the club chosen were Ben Brown, president; M. C. Christensen, secretary; Joe Burge, H. P. Haffa and J. P. Lindquist, directors.

## Shively Joins Hartford Gas Sales Staff

**D**ONALD R. SHIVELY has been appointed manager of sales promotion for The Hartford Gas Company, Hartford, Conn., effective August 1.

A graduate of Cornell University in 1922, Mr. Shively has been associated with the appliance industry for 17 years, serving as a refrigerator distributor, manufacturer's district manager, utility association field promotion manager and appliance merchandising consultant.

For the past two years, he has been acting as consultant to gas and electric company clients on appliance merchandising, advertising and public relations. From 1936 to 1942 he was secretary of the Connecticut Utilities Merchandising Committee, Hartford, and previously was field promotion manager of the Edison Electric Institute's refrigeration bureau.

## Wisconsin Utility Personnel Changes

**P**ERSONNEL changes in Wisconsin Public Service Corporation occasioned by the resignation of Allan C. Davey, sales manager, to accept a similar position with Clark Water Heater Division of McGraw Electric Co. at Chicago, have been announced as follows:

Arnold G. Bur, assistant treasurer and division auditor at Green Bay since 1930 has been appointed sales manager to succeed Mr. Davey.

A new position, that of assistant sales manager, will be filled by Dale Remington, advertising manager.

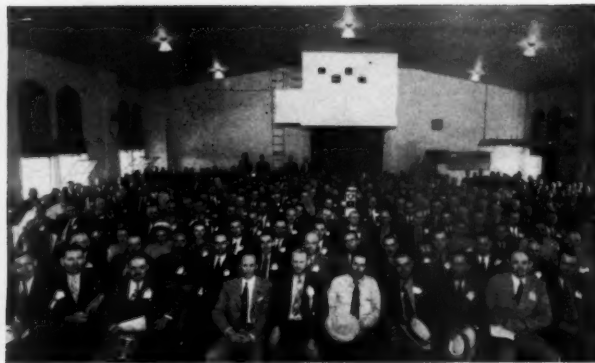
Robert C. Horn, of the accounting department, succeeds Mr. Bur as division auditor at Green Bay.

A new accounting department known as the Property Accounting and Records Department has been created with C. A. McKenna as accountant in charge and W. T. Jess as assistant.

## Wins McCarter Medal

**T**HOMAS J. LAWLER, fitter, Customers' Service Department, The Philadelphia Gas Works Co., was honored May 26 when he received the McCarter Medal at a staff meeting of company officers. The medal was awarded by the American Gas Association for Mr. Lawler's prompt and effective application of the Schafer prone pressure method of resuscitation. He had rescued a woman who had been overcome by gas.

The citation was read to Hudson W. Reed, president of the company, by H. D. Lehman, manager of the Customers' Service Department. The presentation brought to 63 the number of Philadelphia Gas employees who have received McCarter awards.



R. E. Wertz, president, Amarillo Gas Co., addressing the general assembly (right) of the Southwestern Gas Measurement Short Course

## Southwestern Gas Measurement Course Attracts 545 People

WITH a total enrollment of 545 and representatives from 25 states, the 1944 Southwestern Gas Measurement Short Course held at the University of Oklahoma June 6-8 was a conspicuous success.

In normal years approximately 60 percent of the persons enrolled in the course have attended one or more previous courses. This year a poll indicated that 80 percent of those registered were attending for the first time. For the most part, these people were new employees in the gas industry, and they gained untold benefits through the instructional program offered.

On the last day of the course, Earl

Kightlinger, of the Arkansas Louisiana Gas Company, Shreveport, Louisiana, was installed as general chairman of the 1945 course. Max Watson, the retiring chairman, becomes an ex officio member of the general committee, and a member of the Executive Committee.

At a luncheon meeting on June 8, W. H. Woods, Gulf Oil Corporation, Houston, Texas, was elected chairman of the Practical Methods Committee. Mr. Woods will serve in this capacity for two years.

Proceedings of the course will be published in bulletin form and will be ready for distribution on or about September 1.

## P.U.A.A. Makes Better Copy Awards



Thomas H. Spain

WARTIME and postwar advertising problems of public service industries were put under a microscope at the annual meeting of the Public Utilities Advertising Association, June 6 and 7 at the Palmer House, Chicago. With Thomas

H. Spain, advertising manager, Public

Service Electric and Gas Co., Newark, N. J.,

president of the Association, presiding, a highly successful meeting was held.

Russell I. Seymour, Kansas City Power & Light Co., was elected president for 1944-1945 at the annual business meeting, Wednesday, June 7. Other officers chosen were James V. MacDonald, Boston Edison

Co., first vice-president (now in service); E. N. Pope, Carolina Power and Light Co., Raleigh, second vice-president; Charles J. Allen, The Connecticut Light & Power Co., Waterbury, third vice-president; Waldo M. Wright, Amarillo Gas Co., Amarillo, Texas, secretary, and Dale Remington, Wisconsin Public Service Corp., Green Bay, treasurer.

A feature of the meeting was the announcement of winners in the nationwide Better Copy Contest—one of the oldest advertising competitions in existence. An award book containing reproductions of all regional and national winners in gas, electric, combination and transport company classifications is available at \$3.00 per copy from the contest chairman, Charles J. Allen, The Connecticut Light & Power Co., 250 Freight St., Waterbury 91, Conn.

National winners in the contest were:

Newspaper advertising—Public relations, Philadelphia Electric Company.

Newspaper advertising—war effort, The

Peoples Gas, Light & Coke Company, Chicago.

Newspaper advertising—nutrition, Cincinnati Gas & Electric Company and Union Light, Heat & Power Company, Cincinnati.

Newspaper advertising—customer service, Commonwealth Edison Company, Chicago.

Newspaper advertising—transportation, Public Service Coordinated Transport, New Jersey.

Employee magazines—Philadelphia Electric Company.

Employee newspapers—Georgia Power Company, Atlanta.

Bill enclosures—Kentucky Utilities Company, Lexington.

Special books and pamphlets—Montana Power Company, Butte.

Display advertising—Wisconsin Public Service Corporation, Green Bay.

Radio advertising—Cincinnati Gas & Electric Company, Cincinnati.

Annual report to stockholders—Dayton Power & Light Company, Dayton, O.

Annual reports to employees—Consolidated Edison Co. of New York.

Outdoor advertising—Southern California Gas Company and Southern Counties Gas Company, Los Angeles.

Among the speakers were C. V. Sorenson, Northern Indiana Public Service Co., Hammond, chairman of the A. G. A. Residential Gas Section, who predicted heavy sales of gas appliances when the new home market opens.

## Florida-Georgia Group Elects Collins

W BOND COLLINS, Peoples Water and Gas Co., Miami Beach, Fla., was elected president of the Gas Meters Association of Florida-Georgia at the annual meeting held May 19-20 at Miami Beach. B. G. Duncan, Florida Power Corp., Orlando, was named secretary-treasurer.

## P. C. G. A. Annual Meeting Set for Sept. 13-14

THE fifty-first annual meeting of the Pacific Coast Gas Association will be held Wednesday and Thursday, September 13 and 14 at the Ambassador Hotel, Los Angeles, according to E. L. Payne, president, Frank C. Packer, Payne Furnace and Supply Co., is in charge of arrangements.

R. S. Fuller, Pacific Gas and Electric Co., is chairman of the Nominating Committee.

## Canadian Gas Association

ALAN H. HARRIS, JR., manager, gas utility, Winnipeg Electric Co., Winnipeg, Manitoba, was elected president of the Canadian Gas Association at the recent thirty-seventh annual meeting of that organization.



# Accounting SECTION

O. H. RITENOUR, *Chairman*

C. E. PACKMAN, *Vice-Chairman*

O. W. BREWER, *Secretary*

## Customer Problems in Wartime and After



Wallace G. Murfit

ON May 4, 1943, before the Pennsylvania Gas Association, while speaking as chairman of its Customer and Employee Relations Committee, I said,

"The utility industry, in fact all industry, has been so successful in the last decade in dealing with things, that until rationing came along we enjoyed a standard of living unparalleled in the history of the world. At the same time the increase in lack of understanding between industry and its customers has been embarrassing and expensive. To state this briefly another way, we have been able to coordinate things but we have not been able to coordinate people."

Those statements have had twelve months in which to age; twelve months further test as to their truthfulness. There is an increasing number of businesses, aside from the utility industry, that are sensitive to what people think of them. This is evidenced by the newspaper and magazine advertisements and by the widened employees' social programs.

### Training Within Industry

While, for the past three years, there has been a tremendous amount of training within industry, this has all been in connection with the production of goods and is, therefore, of the kind to which I have referred in my quotation. It was effort spent on things and not on people in the sense that they are customers. Again, this being a seller's market, sellers have not thought as much about their customers. In many cases they could hide behind rationing and other Federal rules. We have been encouraging customers to fix things up and make them do and, incidentally, to do this work at home and not ask us to do it.

We shall have to change this attitude of our employees, and changing an attitude is not done by a rule run off on a mimeograph machine and broadcast throughout the company. Furthermore, the reason for rules should accompany their institution, else a calloused employee, when applying it,

By WALLACE G. MURFIT

*Manager of District Offices, The Philadelphia Gas Works Company*

would say: "I don't know why we do it but that's the rule." In many cases, requirements that have been relaxed will be drawn taut again after the war, and the reason for both swings should be on the tip of the tongue of each employee who comes in contact with the public.

After the war, many of our old employees will return to the company, in many cases refilling their old jobs. In some cases they will have new jobs. On the other hand, many who have received specialty training during the war may wish to enter those fields so will not return to us. Thus it may be necessary to train new employees.

### Company Practices Static

Many company practices have remained static during the last two or three years. Training programs have been neglected. Thomas J. Watson, president of International Business Machines Corporation, speaking on education in general stated, "Money spent on education is not an expense; it is an investment." His description of general education is just as applicable to industrial education, with the further observation that in industrial education, results are procured more promptly, more definitely, and with mutual advantage to the sponsor of the educational program. Mr. Watson does not believe that a public educational program should try to fit boys and girls for specific jobs. He believes the function of public education should be developing the minds of the students to encourage them to think on their own. He believes that the training of the employee for a job should lie with the employer, both regarding program and expense.

While during the immediate past it has been a seller's market, and probably will remain so for some time, after the war the pendulum will swing and we, particularly in the gas industry, will be faced by strong competition. The employee, to be most effective from a customer relations standpoint, must have reasonable knowledge of appliances, their operation, function and performance. There have been no new developments placed on the market, at least in the gas industry, in the last three years, but from news that is leaking from our A. G. A. Laboratories, there are important innovations that will be sprung as soon as possible after

the war is over. Information about these should be procured ahead of their arrival on our sales floors, and general informational and educational sessions, probably company-wide, at least for the contact groups, should be initiated to familiarize the employees with these appliances.

There is another serious phase of our business with which all employees should be acquainted, whether working on their jobs as contact groups or not, and that is the operating results of the company in its relation to rates. Will the public think that as we survived the war on our present rates we should reduce our rates as costs come down? The rates for gas have been retained against increased costs of labor and increased costs of most ingredients because management has been able, in other phases of operation, to effect balanced savings, plus the fact that an increased volume of sales has persisted without commensurate increases for plant extensions.

We are proud of the fact that during the war our rates have been raised scarcely at all, if any, and that the quality of the gas remained unchanged. There is nothing else in your personal budgets, except probably electricity and water, about which this can be said. This present advertising asset may become a commercial liability after the war, and we certainly should acquaint the employees of our companies about the matter as the diminishing sales of industrial gas bring new climaxes for management.

### Postwar Personnel Attitude

There are a great many things we may have done and a great many attitudes we may have expressed in our contacts with the public which have "gotten by" as the expression goes, during the war. Excuses will be less acceptable later and the swing toward the buyer's market will not only be reflected in merchandise but most assuredly in personnel attitude. Gordon Ross, in suggesting subjects for discussion by this committee a number of months ago, raised the point: "Do Contact Employees Become Lax?" and he answers his own question by saying that they do and suggests a solution—retraining.

A young lady said to me not long ago that she had some scores to settle with storekeepers, when the war is over, who have been careless and assumed "the public be damned" attitude. She said she had to go to these stores now but would go elsewhere as soon as possible on account of the treatment she had received. This is heard on

Presented at Meeting of Electric and Gas Industry Accountants, Cleveland, Ohio, April 27, 1944.



every hand and we don't want it said of us.

It would be a most worthwhile adventure to make a study, not of the rules as they appear on the company's books, but of the application of those rules, as might be witnessed by scanning the company's mail, or calling on some customers after we have been at their premises on a service call. One of our committee recommends having "cold calls" made in representative neighborhoods by independent public opinion appraisers to ascertain where we are weak in the public's mind.

The postwar planning of our companies involving capital expenditures wherein labor will be engaged, i.e., providing returning service men with jobs, is one about which our fellow workers should be kept informed. Each employee is a potential ambassador of good will on this point as he could inform his friends and acquaintances, and even the customers he serves, about the activities of his employer in this respect. Are we enlarging some mains; replacing some boilers; catching up with some delayed maintenance that give men jobs? All of us should know about it and be able to tell those with whom we come in contact of our activities and disbursements on this project.

This information should go as far as acquainting employees with service performed on civic committees, such as Committee for Economic Development, by executives and in efforts to make jobs for service men. Any effort we can make to convince the public that we are bearing our share of public responsibility is effort well spent.

#### Returning Servicemen Problem

There is a sad realization too that many of these returning men will have become physically handicapped. Some will be our old associates. It should be a part of our planned training to consider the probability that we shall encounter this problem and must be prepared to solve it. This program also should be explained to our employees so that they may be convinced, and in turn convince their acquaintances, that the company recognizes its responsibility in that respect.

One phase of our business that may need review is our credit and collection policy. Customer relations are normally good during wartime when people have plenty of money with which to meet their obligations. Credit and collection men live in the happy realm of few delinquents. As service men return, re-establish themselves in civilian life, revive discontinued businesses or create new ones based on technical training while in uniform, there shall have to be a rescanning of values in credit determination. Credit will have to be flexible else we shall be hardboiled and unsympathetic to a group which have sacrificed much to win the war. No one in the future will have more power to fix our position in civil and political life than will the returning servicemen.

As wartime production diminishes, carrying with it the elimination of much time-and-half-time and double-time pay, many pocketbooks will lose their robust appear-

ance. Steady employment at high rates of pay meant that the average person had the money with which to pay his bills. It followed that economy in household operation was not practiced and, among other things, large utility bills prevailed. As conversion to peacetime production takes place with probable adjustment in wage earners' income, the gas and electric bills will rise in importance in the family budget. Therefore, recent intense collection policies of the utility will receive cold sympathy.

One practice many of us have adopted is estimating gas bills. We were forced into this by a shortage of meter readers. The public acceptance of this program was spotty. As a matter of fact, the methods used were spotty. Some estimated indexes and rendered bills on such indexes; some submitted only dollar charges, treating payments thereon as remittances on account of a future bill to be sent when a real index was obtained. There has been a resentment against payment of a penalty or loss of a discount for tardy payment of an estimated bill. Many persons have refused to accept an estimated bill, reasonable in amount though it may be. It seems to be the consensus that we shall be obliged to resume monthly reading of meters as rapidly as absorption of returned service men permits. This procedure may be accelerated perforce by a rapid increase in public sensitivity towards wartime practices. We must avoid capitalizing on a war-period hangover.

One member of our Customer Relations' Committee believes that the training of employees is the most vital problem before us if we wish to obtain the best customer relationship. Furthermore, he emphasizes the

necessity for this among all employees and not just the contact ones. The rapid turnover in employees; the extension of responsibilities beyond normal scope; new methods of operation, all contribute toward making an employee less familiar, on the average, with his job—the result being that customer contacts are less informative and customer relations adversely affected accordingly. Employee indifference, accentuated no doubt by temptations to obtain a war job, aggravates the condition and again customer relations are adversely affected. One remedy is to cultivate employees' personalities, equip them with wider and more intimate information about company affairs, and thus develop a sense of greater responsibility in representing the company.

I was re-reading Eric Johnston's address given not long ago, wherein he warned labor that from the master's room to the doghouse is a very short step. He told that labor was in the position management was in a number of years ago; that management rode for a fall and labor was riding likewise. Both riders "came a cropper" because they not only did not understand the public nor did they bother to attempt to understand it. Are we not now in a most advantageous position, and deservedly so, while by the same token are we not likewise bound to keep our finger on the pulse of public opinion and establish our industry on the pinnacle which it has earned and to which it is entitled?

### "Orienting the New Worker"

ONE important factor in good morale is the orientation of the new employee, according to a new report, "Orienting the New Worker," prepared by the Policyholders Service Bureau of the Metropolitan Life Insurance Company. According to this study, the aims of any program of orientation are to give the new worker confidence in himself and the company, to make him feel that the company is interested in him and will treat him fairly, that his fellow workers and his supervisor are glad to have him in their department and that he will like his job and have a chance to get ahead. The techniques followed by several companies are outlined in the survey. The complete schedules of two companies in the orientation of new employees are presented as an appendix to the report.

Copies of this study will be sent to executives who address the Bureau on their business stationery. Address: Policyholders Service Bureau, Metropolitan Life Insurance Company, 1 Madison Avenue, New York 10, N. Y.

Further information on this subject will be found in an excellent article by William M. Mussman, director of educational work, Public Service Electric and Gas Co., Newark, N. J., entitled "Introducing the New Employee to the Job," which appeared in the May, 1944, issue of the A. G. A. MONTHLY.

### Tappan Bondaleers



*Adding the feminine touch to the Tappan Stove Company's Fifth War Loan Drive are these five Tappan Bondaleers. From left to right, they are: Kathleen Prion, Betty Daughtery, Wilma Leedy, and Ethel Spohn. Tappan Stove Company exceeded its bond quota of \$200,000 with total subscriptions hitting \$249,500 48 hours before the drive officially opened, and is believed to be the first major industrial plant in the nation to go over its quota*





# Residential SECTION

C. V. SORENSON, Chairman

J. H. WARDEN, Vice-Chairman

J. W. WEST, Jr., Secretary

## "Thar's Gold in Them Thar Water Heaters!"



C. S. Stackpole

By C. S. STACKPOLE

Chairman, A. G. A. Residential Gas Water Heating Committee, Consolidated Gas Electric Light & Power Co. of Baltimore

**S**TANDING on the threshold of a great competitive era, the gas industry cannot afford to neglect any profitable market—and the water heating load is one of the best in our business. It should stand at the top of the list of those markets which we should be prepared now to serve economically and successfully when the war ends.

For the purposes of this discussion, I have divided my subject into three topics: (1) The value of the gas water heater load; (2) Competitive fuel aspects after the war; (3) Gas water heater promotion in the postwar era. I am indebted to members of the Residential Gas Water Heating Committee for some of the thoughts expressed here.

Starting with the first topic, "Value of the gas water heater load," it will be agreed that its value cannot be overestimated. Here are a few additional observations:

1. Gas utilities postwar will find themselves in a position where it will be necessary to recoup losses in war loads and revenue by means of aggressive sales and load building campaigns involving domestic appliances. Here is where domestic gas water heater sales can play a very valuable and profitable part. I know of no other load possible to obtain which can show greater improvement in net earnings.
2. If present high costs of labor and material do not decline materially after the

war, it will be necessary for the industry to find ways and means of obtaining greater revenue per customer in order to meet these higher operating costs. Here again automatic water heating which produces gross revenue about the same as the combined revenue from cooking and refrigeration can play an important and profitable part.

3. Revenue from the gas cooking customer, in most cases, does not fully cover the total costs involved in servicing such a customer, and a second appliance is definitely needed to change these marginal customers into profitable ones. Here is where water heating again can play its part. Care must be taken lest it be overshadowed by some more glamorous load builders like gas refrigeration.
4. The completely automatic features of the automatic gas water heater sell the idea of the modernity of gas and increase its prestige as a fuel for all purposes, and thereby encourage additional uses and give added protection from competition.
5. The gas water heater requires a minimum of service, and its addition to the gas company's system does not entail additional capital outlay for a larger main and service or meter. The commercial office expenses are not increased as the same meter reader records the consumption and the billing department includes water heating in the same bill rendered for cooking and other services. In other words, where "something new is added" in the form of an automatic gas water heater, a customer, equal to about two cooking customers, is obtained with only incremental increases in cost until a very high point of saturation is reached.
6. For additional information regarding the value of gas water heating, I suggest a reading of J. J. Quinn's subcommittee report on "Evaluating New Business Efforts" starting on page 6 of report No. 4, of the Postwar Planning Committee, titled "Engineering and Economic Phases of the Gas Industry," Hall M. Henry, chairman.

While most of the above refers to the value of water heating in the manufactured gas industry's residential field, it is of interest to note here that a large natural

gas company to the west of us with practically maximum saturation in its residential water heating field has indicated the value of this load by its continued efforts to sell modern and efficient water heaters to its customers. These efforts are made in spite of the fact that where old heaters of the horseshoe burner type are replaced with modern equipment, there is a sizable decrease in consumption. But this company realizes that service through inefficient equipment makes customers vulnerable to the inroads of competition, and even in natural gas territory none of us should underestimate the potential competition of the electric folks postwar when their wartime revenue losses must also be recouped.

In regard to "Competitive fuel aspects after the war," first, let's talk about oil, and what a lot of opinions there are even among the experts as to the availability of this fuel postwar. The matter of price, too,



is subject to almost as many guesses as there are people to make them. However, I believe you will agree that for our purposes we should assume that oil as a competitor will be a worthy adversary and that we must prepare to meet its keen competition with aggressive, fighting, "never-say-die" measures. More specifically and realistically, the following, it seems to me, are worthy of mention here:

1. Due to the possible scarcity of oil in our country, the available supply may be higher priced, although we again caution that there have been rumors of oil shortages for the last forty years, but something always seems to happen and the production grows and grows.
2. Higher prices for oil do not necessarily mean less competition, as the oil pro-

Presented at New York-New Jersey Sales Managers' Round-Table Discussion, New York, June 16, 1944.

ducers, distributors and manufacturers of oil burning equipment are "on their toes" and through research and promotional planning will be ready with more and more efficient equipment to get their share and "then some" of the postwar business.

3. The oil burner industry is comprised of aggressive merchandisers who will be back in force after the war, and they will take advantage in their postwar selling and publicity of the outstanding war job oil has done in keeping our motive equipment going on land, sea, and in the air.
4. A new story may have to be advanced by oil men to justify the oil industry's summer-winter hookups which have lost prestige during the war while gas water heaters have gained in prestige. The oil people will find it difficult to convince the public that the cost for water heating with such equipment is negligible. "Too many deluded oil users have found out differently when 'kneeling' before their ration boards," someone has aptly said. We will benefit from all this which can be used for competitive purposes.
5. Complete oil designed automatic storage water heaters made some progress prewar, and while definite engineering changes will be necessary to make them more competitive in first cost and operation, these changes can be forthcoming as a result of research, and the progress of this type of water heater must be watched very carefully.

Let's be sure that we do not belittle oil competition in the future as I believe the toughest competitive years lie ahead.

#### Coal Industry Aggressive

Next, coal—coal bucket-a-day water heaters or pot-type, as well as coal stokers with summer-winter hookups, gained materially in use and prestige during the war due almost entirely to the scarcity of gas and oil equipment. Installations have been confined mostly to multiple dwelling units. *Smokeless* cooking ranges and heating boilers are being developed by the bituminous people, and it is logical to believe that some new water heating developments may follow along these lines. Keep in mind too that there is an almost inexhaustible supply of coal which can be drawn upon, and even though higher prices will doubtless apply, the coal industry will "go to town" to hold the customers it has and be more aggressive than ever about getting new customers in competition with us.

Last, and not at all least, we discuss briefly electricity:

1. The water heating load represents great possibilities for the electric people too, and keep in mind that every electric range user is an ideal prospect for an electric water heater and there are 3,600,000 electric range users in our country as of January, 1944, and 1,084,000 electric storage water heater users.
2. The electric power companies will have greater production and distribution capacities as a result of their wartime expansion.

3. The electric people will want to use water heating as an effective means for recouping some of their wartime revenue losses. The residential field is where the profits lie for the electric utilities too, you know.
4. Customer inducements to buy electric water heaters may be provided by lower promotional rates such as those of the off peak variety and special promotional installation charges. Attractively priced electric water heaters will doubtless be available in the postwar period, and keep in mind that hot water service is completely adequate when properly sized water heaters are used.
5. The fact that the electric water heater may be easily located nearest the point of maximum use permits of high service efficiency.
6. The electric industry with its tremendous resources is getting ready right now to assure itself of a place out front postwar—witness the amount of national magazine and radio advertising being done as of today by that industry.

For more and greater detail about the competitive aspects of oil, coal, and electricity, I refer you to another excellent A. G. A. report—Mr. Beebe's Postwar Planning subcommittee's report—Mr. Rutherford is chairman of the subcommittee—titled "First Report on Competitive Factors Affecting the Realization of Potential Markets."

#### Customers' Appreciation

Now for a brief discussion of the third subject—"Gas water heater promotion in the postwar era from the point of view of customers' new appreciation of convenience." All of us know that the many thousands of homemakers who, because lack of houseworkers has forced them to perform their own household tasks, appreciate more than ever the need for a continuous, adequate supply of hot water. Those people who have experienced trouble getting an ample supply of oil with which to heat their water also have a new and keener appreciation of the convenience of a plentiful hot water supply.

Need I suggest that every member of the armed forces who has spent some time on foreign soil will also be a booster for a convenient system of water heating. Many dwellers in wartime housing projects are for the first time in their lives enjoying hot water provided automatically with gas as the fuel. Many are living in these projects temporarily, and when they return to their homes, they're going to want the same kind of hot water service. Many women working in war plants now who never worked before are learning the benefits of completely automatic devices and the value of high quality equipment.

Isn't it logical to expect that these same men and women will entertain a greater respect for serviceable high quality water heating? But all of this, while most helpful to our cause, does not mean that these same folks will hurry to our stores and break down our doors to get in to purchase

gas automatic water heating equipment postwar. Rather, we will have to resume our job of "beating paths to our customers' doors" to tell them about and sell them the very conveniences which we believe they should be demanding. We want the water heating load, our customers are ready to be sold automatic service, and gas is the ideal fuel for heating water. The main obstacle to be overcome is the fear of operating costs on the part of the great mass of our customers.

In order to be successful in our postwar automatic gas water heater promotions, favorable answers must be found for the following questions:

1. Are your rates competitive?
2. Are your terms of payment such that the monthly payment for the heater itself plus the bill for gas make a total which can be sold to large numbers of your prospects?
3. Is your selling organization adequate and well-trained?
4. Are your salesmen properly and adequately compensated?
5. Are all related branches of the industry organized to render effective assistance?
6. Is the local advertising program a good one and does it stress the almost limitless customer benefits of automatic gas water heating service—its convenience and aid to completely comfortable living 24 hours per day? Does it stress, too, the superiority of such service over inferior methods?
7. Are you planning to continue to support national advertising and promotional campaigns including a possible CP automatic gas water heater activity?
8. Is there a definite tie-in between gas house heating, with emphasis on warm air, and water heating in the tremendous new home market so widely talked about? As water heating "goes" in the new postwar homes, so will it eventually "go" in the old homes.
9. Are your installation methods the most economical possible consistent with accepted standards?
10. If your territory is highly saturated with tank water heaters, is your minimum market goal the replacement of these non-automatic or tank heaters with automatics?
11. Will you provide your sales organization with a plan offering inducements to remove furnace coils when gas water heaters are installed?
12. Have you given due consideration to ways and means of salvaging the summer load for gas where summer-winter hookups are used with oil or coal as the fuel?
13. Are you looking into the possibility of using summer-winter hookups with gas-fired heating equipment?
14. Have you laid plans to keep yourself and your organization completely informed about your competition and its accomplishments?
15. Does your top management have the same strong desire you have to get the water heating load?

In conclusion, it seems to me that in promoting your gas water heater sales in the postwar period, whether you can find profitable answers to the above and whether

you have a 12-month plan, a 24-month plan or a 5-year plan, whether you use a straight time payment contract, a rental-purchase agreement, a straight rental plan, a free trial plan or whether you give away heaters is a matter for your own best judgment. Over the past seven or eight years there has been a definite trend of interest in the possibilities of the so-called rental plan which in a number of companies has done more to increase public acceptance of automatic gas water heating service than any other method utilized in the last twenty-

five or thirty years. Perhaps this is the answer you and I have been looking for; at least the economic possibilities of such a plan should be explored by all of us who have not done so. The answer should be compared with past results to determine the possibility of postwar use.

With the increased prestige gained by gas as a fuel in wartime, it is my firm belief that automatic gas water heating will benefit in a "big way" postwar if we take due and aggressive advantage of our opportunities.

## N. Y.-N. J. Gas Sales Meeting Attracts Record Attendance



R. E. Williams

THE New York-New Jersey Sales Managers' Round-Table Forum, held at the Hotel Pennsylvania, New York, N. Y., on Friday, June 16, under the direction of R. E. Williams, new business manager of the Binghamton Gas Works attracted the largest attendance in the

history of this meeting. The one-day program featured addresses by outstanding gas company executives in addition to informal and interesting discussions by those in attendance.

J. J. Quinn, sales manager, Boston Consolidated Gas Company, a member of the A. G. A. National Advertising and Copy Committees and the vice-chairman-nominee of the Residential Gas Section, spoke on "Advertising Today for Tomorrow's Sales." Mr. Quinn's address featured the presentation of a series of charts depicting the extent of the gas industry's advertising vs. competitive advertising, and the ratio of advertising expenditures to utility revenues.

James I. Gorton, vice-president of Wortman, Barton & Goold, advertising agency for the CP Range Program, delivered a stimulating address on "The Billion Dollar Question." Mr. Gorton pointed out the importance of dealer cooperation and reviewed pre-war gas range sales figures which showed that a large percentage of gas ranges were sold by dealers, furniture and department stores, and other groups. He stated that the industry should utilize every means at its command to extend and improve its relations among dealers. In conclusion Mr. Gorton set forth a list of vital and important questions which the gas industry must answer if it is to be successful.

Carl Sorby, vice-president, Geo. D. Roper Corp., delivered an inspiring talk entitled

"Where Do We Go from Here?", which had as its theme the fact the gas industry has an outstanding opportunity to capture the postwar market, but that it must aggressively promote and merchandise. He pointed out that it will not be a period of windfall sales and that the industry cannot afford to sit by to see what happens. He reviewed the progress of the CP Range Program and its importance to the gas industry and exhibited a group of striking designs of kitchens which he stated will be available for sale in the immediate postwar period.

C. V. Sorenson, Northern Indiana Public Service Co., Hammond, chairman of the Residential Gas Section and director of the Coordinated Gas Kitchen Program, presented a convincing picture of "The Coordinated Gas Kitchen—Today and Tomorrow." He exhibited a series of kitchen photographs and pointed out kitchens that will be available immediately after the war. He called the coordinated kitchen program one of the keys to the industry's future.

### Promotion Symposium

The afternoon session was composed of a symposium entitled "Planning for Postwar Promotion." W. J. Schmidt, sales manager, Long Island Lighting Co., Mineola, N. Y., discussed "Sales Compensation to Increase Gas Loads." There will be a tremendous demand for salesmen after the war, he said, and stressed his belief that the gas industry must be prepared to pay adequate compensation to get good men. Mr. Schmidt's company has given this problem serious consideration and he reviewed for those present a proposed compensation plan which his company intends to put into effect as soon as selling is begun.

H. E. Dexter, vice-president, Central Hudson Gas & Electric Corp., Poughkeepsie, discussed "Problems in Selling the Low-Income Customer." Mr. Dexter presented a chart projecting family incomes for the year 1947, based on full employment, which indicated that 16% of the families of the United States will make less than \$1,000 and another 26% will be in the \$1,000 to

\$2,000 bracket. These families, he pointed out, have normal desires and are interested in purchasing automatic equipment. He then reviewed the results of his company's meter plan which has materially aided in selling the low-income customer.

R. J. Canniff, advertising & sales promotion manager, Servel, Inc., Evansville, Indiana, spoke on "Selecting and Training Salesmen," with particular reference to the results of his company's activity. A nationwide survey among gas utility salesmen and the preparation of a "weighted" questionnaire and standardized interview are part of this program. The Servel Sales Seminars are being revised and will be available to the gas industry for use after the war Mr. Canniff said.

C. S. Stackpole, manager, merchandising and domestic gas and electric sales, Consolidated Gas Electric Light & Power Company of Baltimore, made a valuable contribution entitled "That's Gold in Them Thar Water Heaters"—which is reproduced on accompanying pages.

Lively and spirited discussions after each of the addresses were the order of the day and it was the consensus that the meeting was one of the most effective ever held. The chairman and the council were tendered a vote of thanks for their efforts during the year and J. J. Deely, acting new business manager, The Brooklyn Union Gas Company, was unanimously elected chairman of the New York-New Jersey Sales Council for the coming year. W. J. Schmidt, J. P. Hanlan and Mrs. Helen Steers were unanimously elected as the members of the Executive Committee.

### Tappan "E" Renewed

A SECOND renewal of the Army-Navy "E" award for meritorious service on the production front has been awarded to the Tappan Stove company, Mansfield, Ohio, it was announced June 17 by the navy department in a letter to P. R. Tappan, president.

In receiving the second white star, Tappan Stove becomes the first major industrial plant in Mansfield to rate the second coveted renewal.

### We Didn't Mean It

THE A. G. A. MONTHLY for June must have had pre-invasion jitters when, for no good reason at all, it transplanted an attractive canning center from Minneapolis to Grand Rapids and thereby did an injustice to a most able and attractive home service director—and a past chairman of our own A. G. A. Home Service Committee at that. The canning information center shown in the upper righthand corner of page 270 is hereby returned to its rightful location in the home service department of the Minneapolis Gas Light Company. Sorry Grand Rapids, but you can't have it!

Our apologies to Jeannette Campbell, Minneapolis home service director. Honest, we didn't mean it!



# Report of Interim Committee on Selection and Training of Salesmen

The following report, containing recommendations of vital interest to the gas industry, was reviewed and thoroughly discussed at the meeting of the Residential Gas Section Managing Committee held in Cleveland, June 23. The program outlined here was unanimously approved and the Residential Gas Section has requested the Association to furnish adequate funds to finance this important activity.

**T**HE Committee on the Selection and Training of Salesmen is now fully organized and consists of a General Committee, representing the industry geographically, with a small Interim Committee for the purpose of handling details in actual committee meetings when necessary.

The membership of the committee is as follows:

## Interim Committee

- R. E. Williams, Binghamton Gas Works, Binghamton, New York, Chairman.
- J. J. McKearin, Boston Consolidated Gas Co., Boston, Mass.
- W. L. Hutcheson, Manufacturers Light & Heat Co., Pittsburgh, Pa.
- R. J. Canniff, Servel, Inc., Evansville, Ind.

## General Committee

Includes the above four members of the Interim Committee, plus the following additional members:

- C. K. Patton, Lone Star Gas Co., Dallas, Texas
- R. V. Davis, Southern California Gas Co., Los Angeles, Cal.
- Henry J. Dropp, Milwaukee Gas Light Co., Milwaukee, Wis.
- R. A. Gordon, Washington Gas Light Co., Washington, D. C.

At a meeting of the Interim Committee, held at Association Headquarters in New York City on June 15, at which Messrs. Williams, McKearin, and Canniff were in attendance, the following recommendations were agreed upon for reference to the General Committee, and especially for the consideration of the Management Committee of the Residential Section:

1. That, since practically every utility must rebuild its entire sales organization when V-Day arrives, a procedure for receiving applications from and interviewing applicants for sales positions should be made available to gas company Sales Managers as soon as possible. This procedure to include a form of "weighted" applications and a standardized plan for interviewing prospective salesmen to be worked out in connection with Servel,

Inc., through its representative, Dr. Robert McMurtry, a well known specialist in this field. The purpose of the "weighted" application and standardized interview plan is as follows:

- (a) To serve as a guide or yardstick in the evaluation of an application by reference to a "weighted" average made up from records of successful utility salesmen now employed or formerly employed by gas companies throughout the country.
  - (b) To provide the interviewer with a plan and procedure for interviewing applicants that will produce a maximum of pertinent information as to the applicant's background, experience, aptitudes, habits and motives, and thereby tend to eliminate error in the selection of sales personnel.
2. That the need for adequate training of a new sales organization will be vital, since many of the men will of necessity be former servicemen with little or no sales experience. In addition, former salesmen must be provided with a "refresher" course to condition them for the keenly competitive markets of the postwar period.
- Finally, for gas companies who contemplate active dealer cooperation, a plan for adequate dealer training must be provided. This complete training program to include the following units:

- (a) A course (preferably in a single booklet) for new utility sales personnel, to include an outline of basic sales techniques and the indoctrination of a gas industry consciousness and perspective that will insure good customer relations, good dealer relations, and satisfactory load building results as well as adequate dollar sales volume. A sales meeting manual to accompany this unit would provide information for the conduct of the classes and the introduction of local material as to company policies and programs.
- (b) A course (preferably in a single booklet) for new and former sales personnel, also for use in training dealer salesmen in the technique of selling gas appliances. This unit to cover all domestic gas appliance selling practices, in a general way, which would coordinate with such additional manuals on the sale of specific appliances which might later be provided by appliance manufacturers. Separate sales meeting manuals would be furnished to adapt this unit for the training of utility salesmen and dealer salesmen respectively, by means of discussion

outlines and suggestions for maintaining interest in each type of group meeting.

3. That, since Servel, Inc., has made available the findings of their surveys and investigation to be used in the production of the "weighted" application and standardized interview and, in addition, since the Servel Company has offered the assistance of members of their organization to introduce and explain the program to utility Sales Managers, thereby saving the Association considerable time and expense, and since the cost of production of both the selection material and the training booklets may be underwritten by a schedule of charges for such booklets and material, the committee believes that there should be little or no direct expense to the Association for producing material and booklets required in its program.
4. Finally, since the committee agrees that the effective use of both the "weighted" application and the standardized interview are dependent upon a complete knowledge of the purpose and usage of the material by the interviewer and, since a study of sales training plans of allied industries and the coordination of the proposed sales training program with sales training efforts now contemplated by appliance manufacturers within the industry will be required to achieve maximum results of the proposed program and, since the production of the sales training material and booklets will require constant and careful supervision, the Interim Committee recommends the following:  
That adequate funds be appropriated by the American Gas Association, for the coming Association Year, for the purpose of employing a full-time experienced man to undertake the activities listed above and such other activities, in connection with the program for the Selection and Training of Salesmen, as may be authorized by the committee.

## One-Coat White Enamel Finish Developed

**A**FTER more than 20 years of laboratory and field work, Pemco Corporation announces the development and release of what is said to be the first commercially successful one-coat white—one fired—direct to steel porcelain enamel.

This new product has been named MIRAC—and is hailed as "a miracle of progress" in the enameling industry.





Test kitchen at Washington, showing Miss Sheldon at work

## Home Service Committee Chairman Makes Important Contributions

NO small part in the gas industry's assistance to the nation in its food problem has been assumed by the A. G. A. Home Service Committee for 1944, our third year of the war—and perhaps the most critical from the standpoint of nutrition. Appropriately the chairman of this important committee of the Residential Gas Section is right at the source of the Government's own vast food control program. She is Miss Ruth Sheldon, Home Service Director of the Washington Gas Light Company.

Without as well as within the industry, Miss Sheldon has distinguished herself in local and national nutrition activities during our entire war participation. She was one of a committee of leading nutritionists which last year produced a Handbook for Food Demonstrations in Wartime, for the Office of Defense Health and Welfare Services; in Washington Miss Sheldon has been chairman of a Wartime Food Demonstration committee for the local inter-agency Nutrition Committee, under Civilian War Services. In addition, the Home Service Committee chairman finds spare time to instruct Red Cross Canteen classes, help manage Girl Scout activities and aid in a study of malnutrition in industry with Dr. William DeKleine, prominent medical authority. Her manifold volunteer community war services won her a place last year among the civic leaders of the city selected by Washington's Junior Board of Commerce to receive the coveted V-Man award.

It did not take a war to make a leader of Ruth Sheldon. She has long been prominently identified with organization work, having been president of the D. C. Home

The JUNIOR BOARD OF COMMERCE • WASHINGTON, D.C.



Award of Honor presented to Miss Sheldon by the Washington Junior Board of Commerce for the outstanding civilian volunteer contribution to the war effort



Canning Center on the display floor of the Washington gas utility

Economics Association and also local chapter chairman of the Home Economics Women in Business. Further, she is a member of the board and past officer of the Zanta Club, international association of business and professional women; president of the Nebraska Alumnae Association of the District of Columbia (and on the National Board of Alumnae Associations); local president of the Mortar Board Alumnae Association; and an officer of the Nebraska State Society.

Born in Nebraska, Miss Sheldon attended the State University there, graduating in home economics. After a few years of teaching that subject in the West, she went to New York to continue her studies at Columbia, where she received her M.S. degree in Foods and Nutrition. Then followed more teaching as head of the Home Economics department at the famous old Maryville College, in Tennessee.

First practical experience with gas company home service was obtained at Palm Beach, Florida, and slightly later at Roanoke, Virginia. In 1930 Miss Sheldon accepted an appointment with the Washington Gas Light Company, one of the pioneers in Home Service as well as other advanced customer relations activities. During the 13 years she has occupied the director's post there she has brought her department's program to a high level of efficiency. The experimental kitchen in the Home Service wing of the Washington company's fine new building has been used by government departments for running tests and shooting movies to be used in war publicity campaigns. Test kitchen proof has always been demanded of any recipe or other information issued by Miss Sheldon's department under the name of the Washington Gas Light Company.



# Industrial & Commercial Gas SECTION

CHARLES G. YOUNG, *Chairman*

HARRY K. WRENCH, *Vice-Chairman*

EUGENE D. MILENER, *Secretary*

## Value of Industrial and Commercial Gas Load to Utilities

WHEN I was invited to present a paper at this conference of the Industrial and Commercial Gas Section of the American Gas Association, on the Value of Industrial and Commercial Gas Load to Utilities, my first reaction was that this would be another case of "Carrying Coals to Newcastle"; for who naturally would know more about the subject than the members of this Section. Of course, that was an initial and superficial reaction. The true reaction naturally followed, namely: Who should more desire to understand the facts about this matter than those whose time, energy and thought are actively enlisted in this phase of the gas industry?

Whatever views or opinions may be expressed in what follows are only my own and I am not now speaking for any committee or other group. In order to consider the importance of the industrial and commercial load it is essential to understand something of the trend of industrial and commercial gas sales over the years, with respect both to the volume of such sales and to their relative amount compared with the total for all classes of the gas business. The Association's staff has printed statistics on the subject, all of which any of you also can obtain from the same source and can examine in detail at any time. But, just now, let us, for brevity, consider only the broad generalities.

### Product Variations

Right here we encounter the fact that the gas industry is divided into two major branches, namely, manufactured gas and natural gas. You, who are engaged in the gas business, know the essential differences in conditions which arise primarily from variations in production and transmission and also in the heating value. These differences affect the cost, the distribution problems and the feasible markets. Therefore, the statistics of the industry have been kept separate for these two branches of it. Certain of these statistics covering volume of sales by classes of service, for the period of 1929 to 1943, inclusive, have been presented in striking graphic form in the report by President Ernest R. Acker in the A. G. A. MONTHLY of January, 1944.

While it would be interesting to pursue our entire inquiry in relation to the main

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*Manager, Rate and Research Division  
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Service Corporation  
Chairman, A. G. A. Rate Committee*

subject separately for manufactured and natural gas, too much time would be required for it. Just for the present, let us look at the trends separately and then pass to a more general consideration of the subject.

### Trend of Volume of Gas Sales

In the case of the manufactured gas industry, a decline in total sales set in about 1930 and reached its lowest ebb in 1933. From that time on, a gradual increase in total sales occurred, reaching an annual aggregate of 481,772 million cubic feet in 1943, approximately 56 per cent above the low level of ten years before. The decline in industrial and commercial sales began a little earlier and reached its lowest level in 1932, remaining about the same in 1933, after which a marked growth occurred, reaching a total of 174,054 million cubic feet in 1943, which was about 162 per cent above the industrial and commercial sales of 1933. In 1933, the industrial and commercial sales of the manufactured gas industry amounted to 22 per cent of the total, while in 1943 the industrial and commercial sales increased to 36 per cent of the total.

In the case of the natural gas industry the relative situation was much the same. A decline in total sales, beginning in 1930, reached its lowest level in 1932. A steady increase thereafter brought the total natural gas sales to 1,983,487 million cubic feet in 1943, approximately 137 per cent above the low level of 1932. During the same period, the industrial and commercial gas sales, excluding natural gas used for electric generation, decreased to its lowest level in 1932, after which it climbed to 1,183,316 million cubic feet in 1943, representing an increase of 190 per cent above the industrial and commercial sales of 1932. In 1933, the industrial and commercial sales of the natural gas industry were 53 per cent of the total, while in 1943 they were 60 per cent.

Enough is shown by these brief statements to reveal the real and growing importance to the gas industry, both manufactured and natural, of the industrial and commercial sales from the point of view of

volume. The fact that the growth of industrial and commercial sales has been more rapid than the growth of total sales is indication enough that the growth of domestic sales has been much slower. In fact the domestic sales of manufactured gas in 1943 were slightly less than 10 years before; while those of natural gas increased 68 per cent in the same period.

### Cause of Recent Growth of Industrial and Commercial Gas

It is natural and correct, of course, to attribute much of the recent growth of the industrial and commercial business to the war effort. The manufacture of raw materials and fabrication of implements of war have required, during the war years, enormous amounts of gas for industrial heat applications. That new impetus was given to the development of processes of industrial utilization of gas by the war requirements cannot be questioned. Nevertheless, when the trend of industrial and commercial gas consumption is surveyed over the period of the past ten years or more, it is observed that the volume in the war period is not much greater than that which would have occurred if the upward trend of gas utilization, prior to the general business recession in 1937 and 1938, had continued unabated.

In other words it appears that, had normal conditions continued in effect during the past 10 years, the unimpeded growth of civilian requirements of gas for industrial and commercial purposes might well have necessitated the volume which now, in comparison with present civilian utilization, seems so large. From this we may draw the conclusion that, except possibly during a period of reconversion, postwar requirements of industrial and commercial gas for civilian purposes may, with adequate sales-attention, equal or approximate the gas loads now supplied for war purposes.

It is important to observe, on the other hand, that, unless the gas industry can, in fact, replace the war requirements for gas with commensurate requirements for civilian purposes, it is apparent that a serious recession in the gas load will occur.

### Value of Industrial and Commercial Gas Business to the Utilities

Thus far we have considered the sale of gas for industrial and commercial purposes

\* Presented at American Gas Association War Conference on Industrial and Commercial Gas, Rochester, N. Y., March 30 and 31, 1944.

only in relation to its volume. While the volume of sales in any business may be quite impressive, volume alone is only one aspect of its possible importance to the industry. The question of real importance is whether growing volume of sales leads to or maintains a sound financial position of the seller, or results in undermining a satisfactory position already attained, or merely continues to maintain an existing inadequate financial position. It is necessary for any business to guard against a situation of diminishing returns, which is certain to develop when its sales are expanded under a structure of inadequate prices. It is apparent, therefore, that the value of any class of business is a function of both its volume and its price.

Much of the gas business classed as industrial and commercial is sold under what are regarded as competitive conditions. The competitive conditions are determined either by the relation of the price of gas used by the customer to the value of his product or by the relative cost of an alternative source of heat which the customer regards as adequate for his purpose. In either case the value of the gas service to the customer is involved. Such conditions fix the maximum prices which can be obtained in certain instances for industrial and commercial gas, and such maximum prices are likely to vary with different types of utilization. This, then, places the gas utility either under a limitation of the sales to those uses of gas which can be reached by a single scale of rates or under the necessity of establishing levels of rates for different categories of utilization, depending upon their different competitive conditions. Much of the present industrial gas load has been developed under rate structures that give effect to value of service.

It is of interest to note that the Public Service Commission of Wisconsin, in a recent investigation on its own motion, involving Milwaukee Gas Light Company, and certain other Wisconsin utilities, asserted a strong but qualified opinion in support of rates designed to meet the value of service. The opinion was strong in approving value of service as an important factor in rate-making; it was qualified in asserting that the rates so established must be adequate to benefit the business and its customers as a whole. In that important case, the Wisconsin Commission made the following statements, which are given here in their natural order but with certain intervening omissions for the sake of brevity:

"It is apparent that by the filing and approval of the space-heating rates here involved, there was created a new class of service which respondents then undertook and have ever since furnished to a new class of customers. . . .

"Both the staff (of the Commission) and respondents agree, and we agree with them, that there was a logical basis, and hence a justification, for placing respondents' space-heating service in a separate class for rate-making purposes. . . .

"The essential fact which makes the re-

(Continued on next page)

## Industrial and Commercial Gas National Advertising Expanded



J. P. Leinroth

be substantially increased for the year beginning September 1, 1944. This increase will include several new industrial and commercial gas trade magazines, as well as



F. B. Jones

a greater number of insertions in magazines used this year. In discussing the theme of the advertisements that will make up the enlarged program, Mr. Leinroth stated:

"As the panorama of the accomplishments of gas and modern gas equipment unfolded, it has become increasingly clear that

(1) gas equipment for heat-treating and for other essential operations—in the metals, ceramics, and other fields—has been distinguishing itself far more than most people realize, and (2) that all this new knowledge of the application of gas will be of tremendous significance to industry during the reconversion and postwar period. "On that dual theme our most recent industrial and commercial gas advertising has been founded. Advertisements have presented some of the newer techniques in gas applications—showing how gas heat-treating operations have been incorporated right into production lines, how faster heating rates with gas have made necessary the revision of older heat-penetration tables. In addition, some advertisements have emphasized the versatility of gas, selling the idea that whatever the product, whatever the heating operations required, modern gas engineering can provide, usually with standard units, the right type of equipment to do the job, whether it calls for convection heating, infra-red heating, immersion heating, or almost any other type.

"Back of all industrial and commercial gas advertising is continuous emphasis on the fact that in the complex and exacting war production program, gas has demon-

strated, and is continuing to demonstrate, that it is meeting every requirement—that it is 'making good' in the most important production program the nation has ever undertaken—and that it is certain to have a vital and constantly expanding role in our postwar economy.

"What the gas industry is facing next is the period of reconversion in the industrial field and of rehabilitation of equipment in the commercial field—a critical period which will have an important bearing on the postwar uses of gas.

"Conditions do not change in all industries and in all fields at the same time nor to the same extent. Therefore, industrial and commercial gas advertising for 1944-45 for each particular field will be closely geared to the business and technological changes in that field."

Broadside showing the individual advertisements which will appear in the following month will be sent to all gas company members, industrial and commercial equipment manufacturer members and individual members of the Industrial and Commercial Gas Section.

The advertisements will be prepared by Ketchum, MacLeod & Grove Inc., Pittsburgh, in conjunction with the National Advertising Committee of the Industrial and Commercial Gas Section.

A detailed list of media to be employed in the enlarged program, number of insertions, etc., will appear in a later issue.

### Food Service Speaker

LESTER A. DUBBERKE, supervisor, hotel and restaurant sales, Milwaukee Gas Light Company, represented the American Gas Association on the program of the annual meeting of the Food Service Equipment Industry Inc. held at Edgewater Beach Hotel, Chicago, June 8 and 9. His subject was "Dealer Cooperation After the War." Mr. Dubberke is a member of the Food Service Equipment Committee of the Industrial and Commercial Gas Section.

### Davis Represents A. G. A.

KEITH T. DAVIS, chief engineer of the Bryant Heater Company, was the official representative of the American Gas Association at the annual meeting of Heating, Piping and Air Conditioning Contractors' National Association held at Cleveland, May 31 and June 1. Mr. Davis is chairman of the Technical Advisory Subcommittee for Gas Central Space Heating Research, which subcommittee supervises for the Committee on Domestic Gas Research the Association's research project "Central Gas Space Heating."

## VALUE OF INDUSTRIAL LOAD

(Continued from preceding page)

spondents' space-heating service different from any other service which they furnish, and thus justifies the separate classification for that service, is the simple fact that gas used for space-heating is not worth as much to the consumer as gas which is used for the other purposes for which respondents other consumers make use of gas. . . .

"The difference in value between gas for space-heating and the same gas for other uses furnishes the logical basis for the separate classification for respondents' space-heating services because of the fundamental principle of rate-making that reasonable utility rates cannot result in charges for any utility service which are more than such service is worth to the customer. . . .

"In fixing the price of gas for space-heating service, by the approval of the rate schedules here involved, the proper aim of the Commission was to prescribe a rate which should be, as nearly as possible, the full value of gas for space-heating purposes. . . .

"The incremental costs incurred by respondents in producing the gas used in furnishing their space-heating services (i.e. the additional direct, or out-of-pocket costs incurred in producing the additional amount of gas required for such services) may serve as a criterion for determining the minimum level of rates at which such services could be furnished without direct injustice to consumers of other services and

palpable discrimination. But our proper aim is not any minimum of rates that could be prescribed for space-heating services without discrimination, but rather the maximum of rates, within the limitations of the value of such services and of the rates charged for other services involving comparable consumption of gas. . . .

"It is our conclusion, therefore, that the essential fact which justifies lower rates for respondents' space-heating service than are prescribed for their other services involving comparable consumption is the fact the gas for space-heating is not worth as much as it is for the purposes for which such other services are used; that, so long as such difference in value continues and a resulting differential in rates prevails, the rates for respondents' space-heating service should, as nearly as possible, result in charges of all that such service is worth; . . ."

Re Milwaukee Gas Light  
Company et al:  
51 PUR (NS) 299

The foregoing views of the Wisconsin Commission are in harmony with the Wisconsin law which provides that "the Commission shall provide a comprehensive classification of service for each public utility, and such classification may take into account the quantity used, the time when used, the purpose for which used, and any other reasonable consideration." Laws of

various other states are in general accord with this provision.

Although the foregoing opinion of the Wisconsin Commission was given in a matter involving rates for manufactured gas, there appears to be no reason why the same principle of rate-making does not apply equally in the case of natural gas. In fact, it has been followed even more extensively in the natural gas industry. However, in this connection attention is directed to the dissenting opinion of Mr. Justice Jackson of the United States Supreme Court in the recent case involving the rates of Hope Natural Gas Company,<sup>1</sup> in which he asserted that, because of the irreplaceable character of natural gas its sales for industrial purposes should be restricted and the gas should be conserved for other purposes, such as domestic uses, wherein the value to the consumer lies in other directions than its low cost.

### New Social Philosophy

This theory, which was not adopted by the Court, is expressive of a social philosophy upon which our present laws with respect to natural gas evidently do not rest. It would give preference to certain possible classes of use by future generations against other classes of present-day utilization, without giving consideration to the possibility of changes in the art of heating, over the future years, which may produce adequate substitutes through manufacturing processes. At any rate, so long as natural gas is not wasted but is utilized in economical and effective ways, who can say that its use today will not benefit mankind at least as much as its reservation for future uncertain purposes? Certainly one of the important benefits of industrial utilization of natural gas is its share in the support of production and transmission facilities so necessary to the supplying of domestic requirements.

We now come to the important question of how a gas utility can determine the value to it of any class of its business. It can do so only by weighing the present established price, or the obtainable price for that class of business against the cost of supplying it; and this may involve the matter of incremental costs, referred to by the Wisconsin Commission, if value of service is involved in the rates. Of course, it is not possible to determine with exactness the costs for any particular class of service among several which utilize, in common, many of the facilities and operations of the business. However, thoughtful economic study of a company's business, based on information which can be produced by those individuals of the company's organization who are acquainted with such matters as the influence of load and volume on the required amounts of facilities, supplies, labor, and so forth, can result in the development of guiding-relationships of costs and prices.

Such relationships will indicate whether

## American Gas Association Industrial and Commercial Gas Advertising for July

The National Advertising Committee of the Industrial and Commercial Gas Section, J. P. Leinroth, chairman, and F. B. Jones, vice-chairman, announces that full page advertisements will appear in the trade and business magazines listed below during the month of July. These advertisements are prepared in cooperation with the Committee on National Advertising as a part of the industry's national advertising campaign.

MAGAZINE	THEME
	<b>General Manufacturing</b>
BUSINESS WEEK (July 15— 3/5 page)	Modern Gas heat-treating is "tailor-made." Gas engineers "reach into the file drawers" for the <i>right</i> application for a <i>given</i> product.
	<b>Metals Industry</b>
INDUSTRIAL HEATING METAL PROGRESS STEEL (July 10)	Back of the Nation's production miracle . . . <i>GAS RESEARCH</i> .
	<b>Glass Industry</b>
GLASS INDUSTRY	Back of the Nation's production miracle . . . <i>GAS RESEARCH</i> .
	<b>Restaurant Field</b>
RESTAURANT MANAGEMENT	<i>NOW</i> —cooking is more of a science than ever! <i>GAS cooking</i> is proving itself brilliantly despite adverse wartime conditions.
	<b>Hospital Field</b>
MODERN HOSPITAL	Low-temperature roasting saves meat for the Army too! Recent tests prove value of method long favored for civilian <i>GAS cooking</i> .

<sup>1</sup> 51 PUR 193, 215.



expansion of sales at a given price level will produce satisfactory or detrimental financial results. The developed relationships will indicate also what, if any, adjustments of the price level may be necessary or desirable from an earnings point of view, although, to be sure, the adoption of adjustments may be controlled or prevented by other factors. In those instances in which decreasing returns will result from expanding business, such expansion should, of course, be terminated if the price level cannot be increased.

#### Principle Problems To Be Solved

There are, then, two principle problems to be solved by a gas utility interested in the question of the value to it of an industrial and commercial load. One is the problem of sales development, involving surveys of the potential market and the rate levels necessary to obtain the available business. The other is the problem of the economics of supply, involving studies of the influence of factors such as load, volume of sales, and customer-location, on the cost of supplying service in various classifications. No enterprise that sells a variety of commodities or services to various classes of customers, through channels that involve complex facilities or operations, can permanently ignore these important economic problems of the market and the supply.

Studies such as these have proven valuable to the management of gas utilities, as guides to desirable policies in relation to marketing and pricing. Each gas utility has its own problems which may resemble those of other situations in some respects and may differ in certain others. The solution of these particular problems probably can be developed by the individual gas utilities in various ways. One successful method is the appointment by the management of what may be termed a "Marketing Committee," composed of representatives of the utility's various departments of operation. In such a committee the sales organization naturally has an important place. So has the department that deals with the company's costs, rates and economic problems. The purpose of the committee is to plan, develop and bring together, through what may be considered as subcommittees in the several departments of operation, all of the obtainable information that will throw light on the relation of the economics of marketing and the economics of supply. How and to whom the various phases of the problems should be assigned is not important in this discussion, since these matters will depend, in large measure, on the structure of the organization of the individual utilities and on the experience, competence and field of activity of the several members of the personnel. The important thing is that the equivalent of such a committee be established in the organization of any gas utility with problems of this kind.

In view of the diverse conditions which occur among the several utilities in the industry with respect to the gas supply, its

market and its price level, it is not the purpose of this discussion to attempt to indicate relative values of industrial and commercial gas loads in relation to other services. However, it is my belief that the development of commercial and industrial loads in many instances either already constitutes or presents an opportunity for a great sustaining force in an industry in which the domestic business has, in recent

years, shown either a declining or barely more than a static condition. While we look for some revival of the domestic market, particularly through expansion of house-heating in the manufactured gas industry, the great outlook of the gas industry as a whole appears to be in the industrial and commercial field in which the ever expanding requirements for thermal applications can logically be supplied with gas.

## Midwest Industrial Gas Council Holds Successful Meeting

THE Midwest Industrial Gas Council held its second meeting of the year at the Jefferson Hotel, Peoria, Ill., June 8 and 9. Some 125 industrial engineers, gas superintendents, and others attended the informative and stimulating meeting. The council was the guest of Central Illinois Light Co. and local arrangements were made by George Hathway, industrial gas engineer of that company. H. H. Feierabend, chairman of the council, presided.

Mr. Feierabend, who is supervisor of industrial gas engineering, Northern Indiana Public Service Co., at Gary, was elected chairman of the Midwest Industrial Gas Council at the January meeting in Chicago. Vance Uhlmeier, industrial engineer, Iowa-Illinois Gas & Electric Co., Moline, was elected vice-chairman at the Peoria meeting to fill out the unexpired term of Ben Druse, formerly of the Milwaukee Gas Light Co., who is now associated with Cleaver-Brooks Co. of Milwaukee. Paul F. Gibson, Western United Gas & Electric Co., Aurora, Ill., secretary-treasurer of the council for the past eight years, was unanimously re-elected.

#### Technical Program

Thursday, June 8, was devoted to the usual Technical program which proved interesting and instructive. J. O. Almen, General Motors Corp., Detroit, presented an illustrated discussion of "The Fatigue of Metals as Influenced by Design and Internal Stresses." L. S. Hamaker, Republic Steel Corp., Cleveland, gave a clear picture of the steel industry's postwar outlook. "The Use of Gas-Fired Recirculation for Isothermal Transformation" was the subject of an able illustrated paper by J. L. Foster, chief metallurgist, Austin Western Co. Aurora. W. A. Darrah, president, Continental Industrial Engineers of Chicago, discussed recent developments in "Gas Carburing." C. L. Brockschmidt, chief of the Supply and Allocations Section, Natural Gas Division, Office of War Utilities, WPB, Washington, spoke informally on the activities of his department.

A rare treat for the council was the presentation of a skit, "The Four Industrial Gasateers," given by members of the industrial department of The Peoples Gas

Light and Coke Co., Chicago, namely, Paul Dryer, Samuel Lange, S. C. Parker, W. H. Zuse, and Ralph Hoberg.

At the close of the Thursday meeting, it was voted to eliminate the word "sales" from the name of the council which is now "Midwest Industrial Gas Council."

Friday, June 9, was devoted to inspection trips through the R. E. Le Tourneau and Caterpillar Tractor Company plants. The applications of flame hardening in furnaces of their own design and the special applications to open (furnaceless) flame hardening on a time cycle basis, was particularly enlightening in the former plant. One of the most interesting applications of natural gas in the Caterpillar plant was in the large vertical core ovens, said to be the largest in this country.

—GEORGE L. BALLARD

## "Cooking for Profit" To Enlarge

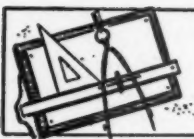
THE magazine "Cooking for Profit" which is sent by gas companies to thousands of their food service equipment customers will be enlarged to include two new sections, according to Fenton Kelsey, Jr. of Madison, Wisconsin, the publisher.

One new section will be devoted to commercial baking with gas, and the other will feature the use of gas for commercial cooking and baking sanitation, with special emphasis on hot water and steam generation.

## P. B. Wiske Dies

P. B. WISKE, 56, sales service manager of Servel Inc., Evansville, Ind., died of a heart attack June 5 while attending the Western section meeting of the Liquefied Petroleum Gas Association in Denver, Colorado.

Mr. Wiske, who has been associated with Servel as a retail stores manager, regional sales manager, and sales service manager, came with the company January 1, 1932. He was formerly associated with the Brooklyn Union Gas Company. Before coming to Evansville to make his home in 1934 Mr. Wiske lived in Bronxville, New York.



# Technical SECTION

CHARLES F. TURNER, *Chairman*

L. E. KNOWLTON, *Vice-Chairman*

A. GORDON KING, *Secretary*

## Production and Chemical Conference Strikes at Heart of Gas Industry Problems



V. J. Altieri (right), Everett, and Dr. C. W. Wilson, Baltimore, chairman and vice-chairman respectively, Chemical Committee



R. Van Vliet, vice-chairman, Gas Production Committee, and H. D. Lehman, chairman, Gas Conditioning Committee



Technical Section officers: L. J. Eck, vice-chair-nominee; C. F. Turner, chair.; L. E. Knowlton, vice-chair. and chair-nominee

**M**EETING in an atmosphere of intense excitement as radios broadcast the news of Invasion, a record number of gas operating men, chemists and engineers participated in a most productive conference on historic D-Day, June 6 and June 7. More than 400 registered delegates assembled at the Hotel Pennsylvania, New York City, under the auspices of the Gas Production and Chemical Committees of the American Gas Association to tackle weighty war and postwar problems.

This 1944 Joint Production and Chemical Conference went to the heart of basic matters vital to the success of the gas industry which is significant of the realistic trend of thought now prevailing. With the great attack heralding the beginning of the end of the European war and the transition to a highly competitive postwar era, the urgent necessity of placing the industry's productive machinery in order to meet this challenge was everywhere apparent. It was emphasized repeatedly that it was up to the operating men to provide the sinew and muscle to fill out the new sales promotional and advertising dress planned for an aggressive gas industry.

V. J. Altieri, Eastern Gas & Fuel Associates, Everett, Mass., chairman of the Chemical Committee, presided jointly with R. Van Vliet, New York & Richmond Gas Co., Stapleton, S. I., N. Y., vice-chairman of the Gas Production Committee. Mr. Van Vliet was pinch hitting for the production chairman, F. J. Pfluke, of Rochester, who was unable to be present because of a painful back injury.



President Ernest R. Acker (right) registering at the Conference. At left are W. R. Fraser, Detroit, and E. L. Sweeney, Everett

As an integral part of the conference, a series of four highly successful luncheon meetings took place Wednesday, June 7. These round-table meetings, encouraging "free for all" discussion of a multitude of problems, were held as follows: Carbonization and Coke—Dr. W. C. Rueckel, Koppers Co., Pittsburgh, chairman; Chemistry in the Gas Industry—Louis Shnidman, Rochester Gas & Electric Corp., chairman; High B.t.u. Gas—L. G. Kreuz, Michigan Consolidated Gas Co., Detroit, chairman; and Water Gas Operation—H. B. Young, Connecticut Coke Co., New Haven, chairman.

### "To Stand Still Is To Retreat"

A speedup of the gas industry everywhere along the line was noted by Major Alexander Forward, managing director, American Gas Association, in his greetings opening the conference. He struck the keynote of the meeting when he said: "We must step up both our scientific and promotional endeavors, since to stand still after the armistice is signed will mean a retreat." Expressing confidence in the technical men, Major Forward concluded: "The gas industry, always recognized at the top in America for technical excellence and engineering ability, confidently rests its production and chemical problems in your hands."

Placing the issue squarely before the technical men, Ernest R. Acker, president of the Association and president, Central Hudson Gas & Electric Corp., Poughkeepsie, asked: "Can we in the postwar world



Samuel Green, Brooklyn; R. E. Kruger, Rochester; and E. W. Guernsey, Baltimore, chairman, Organic Sulphur Subcommittee



Co-chairman Altieri (standing) discussing conference problems with L. J. Willien, Chicago, and Guy Corfield, Los Angeles



A. C. Cherry (right), Cincinnati, and T. H. Kendall, Pittsburgh, chairman and vice-chairman respectively, Distribution Com.



P. T. Dashiell, Philadelphia, and A. C. Sedlacek, Philadelphia, chairman, Luncheon Conferences Committee



F. W. Hartzel, Philadelphia, chairman, Subcommittee on Water Gas, and Lt. A. E. Sands, Pittsburgh



H. C. Jones, Boston; T. F. Papen, Worcester; W. E. Steinwedell, Cleveland; Norden R. Jones, Havana



Commander E. S. Pettyjohn, U.S.N.R., formerly associate professor, University of Michigan

so fix the cost of our product that gas can be sold at a profit and at a price which the consumer will pay?"

Stating that "the most important question before the operating and technical men of this industry is to determine what our future costs will be," he continued: "It is not a question of saying to the sales department: 'We'll make the gas—you sell it'—or of the sales department saying: 'We could sell the gas if you get the price down!' We are all in the same boat and have a common responsibility. We have a business problem before us and my plea today is for the Technical Section, the sales section and every other section to look at this problem on an overall basis and to consider that they are a part of the whole structure of the industry in finding the answer to this business problem."

With the American Gas Association spending more than half its gross revenue on research, much of it utilization research, President Acker asked "What facilities are we developing to take care of the more fundamental production research? We will have the appliances but what about the product?" He deplored the somewhat negative attitude of part of the industry toward the house heating load because of its peak load implications, and urged the industry to tackle the peak load problem with renewed vigor. "Action is required today" was his parting advice.

A thought-provoking analysis of "The Future Production and Quality of Coal"

was presented by Z. C. Wagoner, Amherst Fuel Co., Charleston, W. Va., who advised the gas and by-product industry to look to the day when lower quality fuels can be utilized economically. After praising the Bituminous Coal Act of 1937 for reestablishing the coal industry before World War



F. J. Pfluke

Corp., chairman of the Gas Production Committee was nonetheless a part of the proceedings. In an unprecedented surprise move, last minute arrangements were made for him to address the conference by telephone from his bedside in Rochester. This he did and conveyed his greetings and best wishes to the meeting.

Prevented by a painful back injury from attending and presiding at the Joint Conference after playing a leading role in its planning, Fred J. Pfluke, Rochester Gas & Electric

II, Mr. Wagoner declared that today this act was non-existent and added: "Instead of minimum prices we have maximum prices and a market in which both spot and contract shipments are made at 'minimum price at time of shipment' for every grade and size produced." He asserted that this condition will not necessarily prevail in the postwar market and predicted that "present maximum prices would approximate future minimum prices."

Mr. Wagoner urged legislation, such as the Bituminous Coal Act, to protect the coal industry from itself and avert waste of this valuable natural resource through the indiscriminate use of special purpose high quality coals.

The next speaker, J. D. Davis, U. S. Bureau of Mines, Pittsburgh, continued the discussion on coal by bringing the conference delegates up to date on the latest joint A. G. A.-Bureau research. With the aid of slides, he gave an interesting account of this valuable continuing project.

#### Gum Problem Solved

Developments in the research investigations into the control of vapor phase gum and organic sulphur were described by H. D. Lehman, The Philadelphia Gas Works Co., chairman, Gas Conditioning Committee, and Dr. E. W. Guernsey, Consolidated Gas Electric Light and Power Co. of Baltimore, chairman of the Subcommittee on Organic Sulphur.

With the adoption by the A. G. A. Ap-



*Louis Shnidman, Rochester, Chairman, Luncheon Conference Committee*



*H. A. Lockhart, Haverhill; L. E. Hurst, Haverhill; J. E. Buckley, Boston; Z. C. Wagoner, Charleston*



*Dr. A. R. Powell, Pittsburgh, and F. A. Mueller, Omaha*



*E. W. Jabn, Baltimore, and S. G. Page, Pittsburgh, chairman and vice-chairman respectively, Motor Vehicles Committee*

proval Requirements Committee of a requirement calling for the use of protective devices on pilots and small flows for appliances to be used on manufactured gas for protection against vapor phase gum deposition. Mr. Lehman stated that his committee considered that this basic problem of the manufactured gas industry had finally been disposed of. Dr. Guernsey outlined the work on organic sulphur in progress at the Institute of Gas Technology and indicated that the committee was in close touch with developments at home and abroad.

The Tuesday morning session closed with a discussion of "Safe Manufactured Gas Operation" by Charles Koons, Koppers Co., Seaboard Division, Kearny, N. J., chairman, Subcommittee on Safety. Mr. Koons called attention to the high rate of accidents and stated that accident prevention was a training problem which deserved management's complete support. He also gave examples of hazards to be avoided and stressed the importance of better design of equipment to prevent accidents.

#### High B.t.u. Gas Report

A valuable report of the High B.t.u. Gas Subcommittee, prepared by L. G. Kreuz, Michigan Consolidated Gas Co., Detroit, chairman, was summarized by G. J. McKinnon, of the same company, a member of the subcommittee. This comprehensive study, based on results obtained from 51 companies, is divided as follows: (1) Out-

line of standby processes; (2) List of companies reporting substitute gas standby facilities; (3) Description of substitute gas standby facilities; (4) Summary of substitute gas statistics reported; and (5) Bibliography. It contains a large amount of factual and statistical data which lays a splendid foundation for future work as well as offering assistance to any company confronted with the problem of converting from manufactured to natural gas or concerned with the matter of adequate supply.

J. V. Postles, The Philadelphia Gas Works Co., chairman of the Technical Committee on Postwar Planning Cooperation, reviewed the work of his committee and stated that the postwar technical research projects had been divided into (1) those most urgent and (2) those to be investigated from a long-range viewpoint. In the first group have been placed: low investment production equipment, utilization of natural gas condensates, and utilization of off-peak production capacity for other than gas production purposes. The long-range study group includes: report on Fischer-Tropsch and the several hydrogenation processes, the use of other than oil or natural gas for enriching purposes, and complete gasification.

Through a Chemical subcommittee headed by T. L. Robey, Washington Gas Light Co., Washington, D. C., work on the first group of subjects is to be started at once by the Institute of Gas Technology. An initial appropriation of \$8,000 has been

made for this purpose, Mr. Postles reported. In addition, a complete list of subjects will be compiled in reference to the Fischer-Tropsch and hydrogenation processes.

Following Mr. Postles' presentation of the specific technical research projects under way, A. M. Beebe, Rochester Gas and Electric Corp., Rochester, N. Y., chairman of the A. G. A. Postwar Planning Committee, gave an overall picture of the gas industry's postwar objectives. He emphasized the importance of obtaining complete support for the 31 recommendations of his committee which provide a rallying for postwar action.

Operation of the recently set-up Manufactured Gas Department, stemming from the Association's reorganization, was described by the chairman of the department, Past President George S. Hawley, president, Bridgeport Gas Light Co., Bridgeport, Conn. Prior to his address, Mr. Hawley had presided at the first meeting of the Department's Managing Committee, and a report of this meeting appears elsewhere in this issue.

#### Oxygen in Gas Production

Dr. S. P. Burke, of Columbia University, New York, chairman of the newly created Subcommittee on Use of Oxygen in Gas Production, defined the scope of the activities planned on this important subject and presented preliminary findings of his group. He stated that if 98% oxygen is substituted for air in the producer, (1) a gas of approximately 300 B.t.u. can be continuously manufactured from coke without increasing clinkering difficulties; (2) that approximately 220 cu.ft. of oxygen are necessary for the production of 1000 cu.ft. of blue gas; (3) there is no indication that any serious refractory problem will be encountered nor (4) will the deterioration of grates or other parts of the producer be seriously increased. He noted that in addition to increasing gas machine capacity, "very tangible savings appear possible because of simplification of gas production equipment and continuous operation."

A further significant development in the use of oxygen. Dr. Burke reported, which apparently is being experimentally realized in Germany, is the automatic enrichment of the gas through continuous operation under pressures up to 20-25 atmos. In reference to cost of 98% oxygen, he cited several 1939 German estimates, one of which indicated a cost of production of about 14 cents per M cu.ft. It was his conclusion that costs of oxygen "appear to have approached the realm of possible utilization by the manufactured gas industry."

#### Increasing Water Gas Capacity

An able report on the accomplishments of various plants in increasing their water gas capacity was presented by George R. Steere, Swampscott, Mass. The author divided the various factors into five basic groups, listing under each factors tending to increase set capacity. Group 1 deals with the design of the machine and its auxiliary equipment; Group 2 with equipment and



## Conference Papers

A limited number of complete bound sets of papers presented at the Joint Conference of the Production and Chemical Committees and the Annual Distribution Conference are available at \$1.00 each per set. Address all orders to American Gas Association, 420 Lexington Ave., New York 17, N. Y.

methods of increasing the percentage of actual gas-making time; Group 3 with suitable raw materials for maximum capacity; Group 4 with operating methods for increasing capacity; and Group 5 with special processes or materials not ordinarily used.

The first day's session concluded with a description of a newly developed automatic domestic coke stoker by C. E. Shaffer, Koppers Co., Research Dept., Kearny, N. J. Consisting of a plunger-type underfeed stoker tube, a mechanically shaken grate, an ash-removal system and a full-sized bin, the Bryant stoker is in its first year of manufacture, Mr. Shaffer said, and 250 users have found that it performs "remarkably well." Mechanical failures have been infrequent with the exception of the grates and grate-driving levels. Improved designs are now being developed for postwar markets.

### Mixed Gas Research

Opening the Wednesday morning session, H. O. Loebell, chairman of the Mixed Gas Research Committee of the Natural Gas Department and Technical Section, summarized the results of the investigation being conducted at the A. G. A. Testing Laboratories. This project involves the use of substitute gases for natural gas and for mixed natural and manufactured gas of from 800 to 1200 B.t.u. per cu.ft., and is an extension of a former study on gases of less than 700 B.t.u. per cu.ft.

The primary objective of the investigation, Mr. Loebell said, is to determine accurately to what extent various types of substitute peak-load gases can be mixed with base natural gases without adversely affecting performance of appliances on a company's lines. While this year's program deals only with natural gases as the base load, he stated that future work will cover 800 B.t.u. mixed gas situations.

Mr. Loebell urged the gas industry to become familiar with the increasingly critical problem of meeting winter house heating peak loads and indicated that, from the standpoint of appliance performance, the current mixed gas research will prove helpful. He advised each company to supplement this activity to the extent of determining availability of fuel supply, possibility of converting existing gas plant equipment, and general study of economics involved.

### Coke Oven Gas Substitute

A suitable substitute for coke oven gas

can be produced in a water gas machine, O. W. Barends, Wisconsin Public Service Corp., Sheboygan, told the conference in describing results of his company's experience last fall. When the only producer of the coke oven plant was shut down for repairs, the substitute gas was produced over a period of three days and pumped into the distribution system without any mixing with the coke oven gas. During this test, not a single complaint was received which could be attributed to the substitute gas, Mr. Barends declared.

An interesting talk on butadiene manufacture was presented by Guy Corfield, Southern California Gas Co., Los Angeles, whose company operates such a plant. With the aid of slides, he presented its chemical and production aspects and discussed the adaptability of a former oil gas standby plant to butadiene operations. Due to stringent censorship by Washington authorities, Mr. Corfield was obliged to omit some of the important technical details.

### Utilization of Gas Detectors

Describing the utilization of gas detectors, W. R. Fraser, Michigan Consolidated Gas Co., Detroit, said most of the equipment was well designed and would give good service if properly maintained. "Maintenance of equipment is very important and should be the first consideration of any company using it," he said. "Well trained maintenance men who thoroughly understand the mechanisms of detection equipment must be kept available and be made responsible for the testing and upkeep of the instruments." Regular use of

the detectors by operating personnel was recommended.

Mr. Fraser, as chairman of the Chemical "Wrinkles" Subcommittee, submitted a comprehensive and valuable printed report to the conference. Embracing 107 operating wrinkles covering many phases of gas company operation, the report will find wide and useful application. Some of the wrinkles will be published in this and subsequent issues of the MONTHLY.

Attacking a new problem in the gas industry, Dr. E. F. Guba and Dr. E. V. Seeler, Jr., Massachusetts State College, presented a report of "Studies on the Identity and Control of Stilbaceous Mold in Gas Purifying Sponge." Following discovery of the extensive growth of a fungus in the gas purifying sponge at the Everett plant of the Boston Consolidated Gas Company, the problem was assigned to the authors who identified it and recommended control methods. Previously known in Europe where it has been found in wood pulp destined for paper manufacture and in decaying wood in leaf mold, this is the first record of its occurrence in the gas production industry, and the first record of its presence outside Europe. Sterilization of the wood shavings or ready made sponge with heat or chemicals before installing was shown to be desirable.

### Oil Supply Held Ample

Pertinent facts and considered opinion on the supply of gas enriching oil were laid before the delegates by P. T. Dashiell, vice-president, The Philadelphia Gas Works Co., who asserted that "there seems to be



Postwar Planning Cooperative Committee of the Technical Section at its June 8 meeting in New York. Left to right, front row: A. M. Beebe, Rochester, chairman, Postwar Planning Committee; Gladys Hanshaw, New York; and C. F. Turner, Cleveland, chairman, Technical Section. Second row: L. E. Knowlton, Providence, vice-chairman, Technical Section; Hall M. Henry, Cambridge; J. V. Postles, Philadelphia, chairman, Postwar Planning Cooperative Committee; T. J. Robey, Washington; J. I. Yellott, Chicago; and B. Miller, Chicago. Third row: A. C. Cherry, Cincinnati; H. B. Andersen, Philadelphia; V. J. Altieri, Everett; E. P. Noppel, New York; J. J. Sebastian, Chicago. Back row: L. J. Willien, Chicago; H. L. Gaidry, New Orleans; R. Van Vliet, Staten Island; and E. J. Boothby, Washington.

not the slightest indication of a scarcity of crude oil." With only 4% of total production of fuel oil used for carburetting water gas and large proven reserves available, Mr. Dashiell concluded: "Under conditions which are most likely to exist in the postwar period, there will be no upset in the general use of the carburetted water gas process by a scarcity of carburetting material."

He cautioned, however, "those who still cling to the use of gas oil, because their plants are equipped only for its use or that of some such material, are in a precarious position, and should, as quickly as practicable, arrange their plants to efficiently use oil of the heavy fuel class." This will add materially to the flexibility of their operations and reduce the cost, he maintained.

## WRINKLES

This is the first in a series of "wrinkles" compiled by the Chemical Wrinkles Subcommittee of the Technical Section consisting of W. R. Fraser, Michigan Consolidated Gas Co., Detroit, chairman; R. M. Buck, Michigan Consolidated Gas Co., Detroit; F. H. Bunnell, Consumers Power Co., Jackson, Mich.; and Marshall Hyde, Detroit Edison Co., Port Huron, Mich.

More than 100 wrinkles are contained in the complete report of the Wrinkles Subcommittee which is available at Association headquarters. It is planned to publish as many of these wrinkles as space will permit in subsequent issues of the MONTHLY.

### GAS PLANT EQUIPMENT

#### Sticking of Carriage Wheels on Water Sealed Gas Holders

Alemite grease cups are installed and once every two weeks a grease gun is used for lubricating or checking the lubrication of the wheels.

The top carriage wheels especially, bind and cause wear and hard turning.

#### Using a Fork-Type Car Loader as a Barrel Hoister

In the liquid purification of illuminating gas, sulphur is recovered in the form of a paste and stored in barrels. The barrels weigh in excess of 600 pounds gross weight and are normally stored three on a pallet and piled three pallets high by the use of a forked-type car loader.

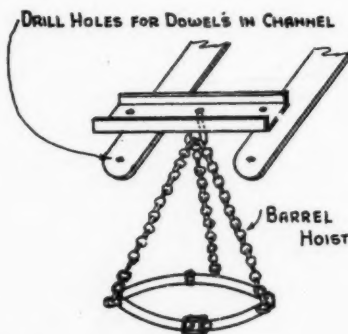
Occasionally it is necessary to move single barrels from one pallet to another and for this purpose a method of lifting a single barrel by using the car loader was devised.

A section of 6" channel is fitted with a hook at the center and 2 3/4" rivets were welded in to form pins as shown in accompanying sketch. Two holes are drilled in the forks of the car loader to admit the pins of the 6" channel.

A barrel hoist made of a ring of 2 1/2" x 5/16" strap iron and supported by three chains is hung on the hook. The hoist is made with the ring of strap iron hinged on one side having an easy opening catch on the opposite side. The diameter of the ring is such that when the ring is closed, it fits snugly below the bulge of the barrel and cannot open large enough to allow the barrel to slip through.

As a contribution of the Pacific Coast, a paper by C. Eldon White, San Diego Gas & Electric Co., San Diego, Calif., entitled "Corrections Applicable to the Approximate Determination of Paraffins in Natural Gas by Slow Combustion" was distributed at the meeting. Another paper on "The Spectrometric Analysis of Gases," by L. J. Brady, industrial fellow, Mellon Institute, Pittsburgh, describing infra-red and ultra-violet spectroscopic procedures, was also distributed. The latter is a contribution of the Koppers Company fellowship on coal products analysis.

Papers presented at the conference are available and a detailed study of their findings is recommended.



When not in use, the entire attachment is easily slipped from the forks of the car loader.

### DISTRIBUTION

#### Mains and Valves

#### Repair of Leaking Pit Holes or Plugging Tapped Openings in Steel Mains

Small, isolated pit-hole leaks in steel mains can be repaired by inserting in the hole a small tapered steel pin and then welding or brazing around the pin. On high pressure lines the pin is held in place with a clamp while doing the brazing or welding. A clamp has been developed which fastens around the pipe by means of a chain and has an outstanding arm which holds an adjustment screw by means of which the pin can be held solidly in place.

When necessary to remove a service or small main connection from a steel main, the hole is plugged by welding in a tapered steel pin. The fitting is removed and a tapered

steel pin driven in the opening in the main. The pin is welded to the main with an arc weld and then cut off with an acetylene torch.

Bars about 24" long with both ends tapered for about 1" from the end have been found suitable. After both ends of the bar have been used, it is sent to the machine shop and retapered.

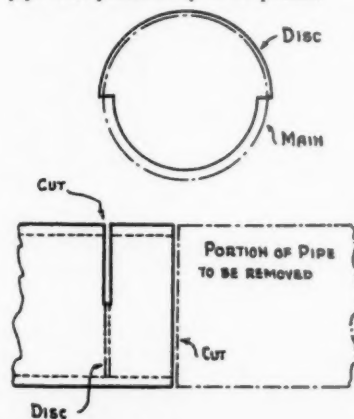
#### Steel Tees With Wood Plugs Used to Control Pressure When Making Hot Taps

The tee is connected to the main either by welding or with a service saddle. The new connection is tied into the branch of the tee before the hole is drilled in the main. The drilling is done with a machine, and through a gate valve.

The wooden plug is inserted in the top of the tee with a plugging device working through the gate valve. The plug is made tight by striking the handle of the plugging device a blow with a hammer. The plugging device and gate are removed and a screw cap installed to complete the operation.

#### Discs for Pressure Control on 3" and Smaller Mains

The perimeter of the top half of the disc is made to fit the outside and the other half to inside circumference of the pipe. A slot is cut in the pipe, with a one-wheel pipe cutter, slightly more than one-half of the circumference, at the point where the pressure is to be controlled. The slot is cleaned and enlarged by sawing with a hacksaw. The disc is inserted in the slot and forced in place by light strokes with a hammer. When the large part of the disc conforms with the outer circumference of the pipe, the smaller part bears against the inner circumference of the pipe, forming a satisfactory but not complete shutoff. If the pipe is to be dead ended, the disc may be left in place and covered by a compression cap. If a tie-in is to be made, the pipe is cut about 1 1/2" from the disc. A compression coupling is loosely installed with one gasket bearing on the end of the pipe. The disc is then removed and the coupling placed in position to cover the slot. This device has been used on 3" and smaller pipe with pressures up to 20 pounds.



# Public Utility Motor Vehicle Conference



*E. W. Jahn, conference chairman (right), conferring with G. Ralph Strobl, General Committee, SAE, and Linn Edsall, Philadelphia, past Motor Vehicles chairman*

UNDER the leadership of E. W. Jahn, Baltimore, Md., Chairman of the A. G. A. Technical Section's Committee on the Operation of Public Utility Motor Vehicles over fifty public utility transportation executives, took part in the 1944 Conference on the Operation of Public Utility Motor Vehicles held at Philadelphia, Pa., June 27.

Stating that "property damage and fatalities from highway accidents are bound to increase at an alarming rate and present control methods cannot alone serve to keep our operations even relatively safe," Linn Edsall, Philadelphia Electric Co., Philadelphia, Pa., stressed "Safety Through Proper Driving Procedure." Mr. Edsall feels that few automobile drivers have been properly grounded in the fundamentals of automobile operation. Two typical methods of training were presented by the speaker—one making use of group training methods and the other dealing with individual drivers. When large numbers of men must be trained quickly, the use of group or class training is necessary but, when time permits, the individual specialized instruction is to be preferred.

Using slides to illustrate, the subject of "Air Compressors and Their Application to the Gas Industry" was presented by C. T. Chapman, manager, Ingersoll-Rand Co., Philadelphia, Pa. Mr. Chapman traced the development of the use of compressed air and its importance to industry with the end in view that users might know better how to select, operate and maintain portable air equipment. It was stated that newer units are so improved as regards increased efficiency, smaller size and less weight as to make the retention of older tools uneconomic. The power take-off drive versus complete units was discussed with

the conclusion that selection of the power take-off drive is subject to question due to its larger fuel consumption and shorter life.

At the General Luncheon the speaker, P. T. Dashiell, vice-president, The Philadelphia Gas Works Co., Philadelphia, Pa., told of the establishment of the Motor Vehicle Committee, its progress and outstanding performances to date with its great value to the gas industry. Mr. Dashiell also spoke on the future availability of petroleum expressing as his own opinion the belief that there is nothing to worry about for a long time to come as regards the supply of oil for use in motor vehicles.

The afternoon session was in charge of B. D. Connor, Jamaica Plain, Mass.

Illustrated by a 25 minute film, A. A. Brainerd, Philadelphia Electric Co., Philadelphia, Pa., considered "Three-Dimensional Seeing." Shop lighting was given

special emphasis by the speaker, particularly auto repair shop lighting. The film shown was prepared as an outgrowth of the need for improving visibility in industry and was first developed for producing better seeing conditions in machine shops in Philadelphia.

Speaking on the subject of "Economics of Standardization" Sidney F. Gale, sales manager, American Coach and Body Co., Cleveland, Ohio, treated standard body design for various utility applications, future developments and new materials.

The final order of business for the Conference was an "Open Forum on Specific Design Features" by members of the Committee on the Operation of Public Utility Motor Vehicles. S. G. Page, vice-chairman of the Motor Vehicle Committee, presided at the forum which brought out a wealth of valuable operating information.



*Speakers' table at the general luncheon. Left to right: C. T. Chapman, Philadelphia; S. F. Gale, Cleveland; A. A. Brainerd, Philadelphia; B. D. Connor, Jamaica Plain; P. T. Dashiell, Philadelphia; E. W. Jahn, Baltimore, conference chairman; S. G. Page, Pittsburgh, vice-chairman, Motor Vehicles Committee; G. R. Strobl, Ardmore, and Linn Edsall*



*The Motor Vehicles Committee in session. Left to right, seated: L. S. Hays, Ottawa; S. G. Page, Pittsburgh, vice-chairman; E. W. Jahn, Baltimore, chairman; B. D. Connor, Jamaica Plain, and Henry Jennings, New York. Standing: Jean Y. Ray, Richmond; H. R. Grigsby, Oklahoma City; F. Heinlein, Cincinnati; Linn Edsall, Philadelphia; C. A. Collins, Washington; F. L. Lanzi, Brooklyn; and H. A. Peterson, New York*



# Progress Report on Gas Servicing Problems

THESE problems were submitted by the members. Training programs for service personnel at the present time will raise the standard of service work and prepare a greater percentage of the personnel for possibly more complex postwar servicing problems. A training program for employees of all departments to supplement the Service Department in handling general outages is of questioned value. This could stand further investigation.

Any education or specific training program in effect now or about to be placed in effect should be so designed as to fill the needs of the Service Department for *high grade personnel* from the present ranks and with those who will return from military service. The postwar work will probably require an increase in Service Department personnel. This increase could be made to a great extent in the "apprentice level" if the present training program takes the postwar aspect into account. One member states, "I'm still convinced that we must start by developing and maintaining skilled and constantly trained personnel in our service departments."

There is little hope for any success in any educational or training program in which the employee must use his own time to attend. We are fairly well assured that attendance would be too low although those who did attend under such an arrangement would, with little doubt, represent those with the greatest interest and desire for advancement. Perhaps there is some room for thought in considering a program which includes both routine working time schedule and a supplementary "after hours" voluntary attendance schedule.

In the training of existing service personnel, it has been fairly well established that the routine school method of approach has proven quite satisfactory. Some sources are satisfied with the training of men in the field by placing them with more experienced men for individual instructions by observation or with inspectors and supervisors. Specific training programs are not yet universal.

There has been little data available as to what might be considered minimum and maximum time required for training per year. This question requires further analysis. Training of servicemen on company time has been found quite necessary to assure attendance.

One large company reports weekly meetings of foremen and their men on company time lasting one hour. Problems are presented at these meetings.

## Service Work Specialization

Service work specialization seems to be more prevalent with companies operating in the larger cities than elsewhere. The

## By the A. G. A. DISTRIBUTION SUBCOMMITTEE ON WORK ON CUSTOMERS' PREMISES

*J. M. Pickford, Chairman*

volume of appliances of the nature which requires special treatment, no doubt, accounts for this. It is quite evident that a policy of this nature will lead to more specialization as new postwar products are introduced.

Individual attention in corrective training of servicemen who fail to perform some phase of their work satisfactorily has proven most successful. This training is usually done in the field by some qualified member of the department. This enables the service supervisor to determine if the failure was due to lack of training or negligence on the part of the serviceman.

## Classification of Servicemen

The classification of servicemen as to ability is a matter for serious consideration. With few exceptions, length of service is not the entire controlling factor in determining classification. The methods used for determining classification vary somewhat among the companies with the supervisory staff handling this phase by observation in most cases. There seems to be a growing tendency to turn this function over to the educational or training staff or personnel department.

Qualification standards for classification of servicemen are recognized as being the fairest and least discriminatory method. More could be done in the way of designing individual examination procedures to accomplish this purpose. Most companies have been content to leave this function in the hands of the supervisory staffs. A method of grading by one company merits consideration. The supervisory staff is aided by a standard form for grading the various qualifications.

## Teaching Customers

The use of advertising material in teaching customers to do things for themselves is of questionable value according to some of our committee members, although the customer has shown a desire for more information. An analysis might indicate that most of this information in printed form originates from the manufacturer rather than the utility company. It is quite possible that the utility company is in a better position to fulfill the desires of the customer in this respect. Instruction of the customer by the serviceman represents the major effort in this respect. More could be done to encourage the customer to light

up his own home heating equipment and thus reduce one of the major sources of seasonal strain on the service department, as well as to lessen his own inconvenience of delay in providing for his own comfort. This matter merits further study. Several companies report programs for educating customers to light up and shut off certain appliances.

We have not received much information on the matter of established procedure for inspection of plumbers' and heating contractors' installations by the companies represented in the correspondence received to date. That there are utility companies who have such programs is a matter of record. Lack of well formulated plans in this respect may cause serious difficulties in the postwar world. A good dealer-utility relationship is recognized not only as desirable but also as a necessity. One company reports offering their school and laboratory facilities to the dealers and plumbers.

## Manufacturer Information

More and better information on installation and servicing of gas appliances from the manufacturer is needed. Too often, all that is available has been of a promotional nature directed at the sales department and the buying public. One of the members states, "The greatest need is promptness in providing descriptive literature."

Quality control of customer service field work is accomplished in most cases by the inspection method. This also ties in directly with training and established standards on installation methods. Soliciting of the customers' comments appears to be a favorite method.

## Humidity Problems

Information on humidity problems in prefabricated and other tightly constructed vapor-proofed homes is, as yet, very meager. It is recognized as a problem for serious consideration and all efforts should be made to determine what the problem is and its remedies. The committee should keep abreast of the research being done. The A. G. A. Residential Gas Section has a committee on this work, and our function should be, perhaps, to supply them with our thoughts and findings.

## Outside Meter Locations

Outside meter locations either above or below ground have not introduced any serious problems in the milder climates but there is some divergence of opinion about their use in the colder climates. Outages due to freezing of the moisture content of the gas seems to be governed by several factors which include degree of



exposure, degree of saturation of the gas, rate of flow, surrounding air temperature and movement. The net result on unaccounted-for gas depends, of course, on the above factors and also the seasonal gas consumption. In a home heating job for instance, perhaps as much as 90% of total yearly consumption will occur in the winter months when outside temperatures may average 40° or lower. This could result in an appreciable metering loss.

Where such above ground installations are a servicing problem or represent a contributing influence on unaccounted-for gas some method of insulating to conserve the sensible heat in the gas as well as to take advantage of heat from extraneous sources, such as that which would be transmitted through the wall of a building, would seem desirable. Underground meter installations do not seem to impose a problem as to freezing nearly as much as in flooding and trapping. It would be of great interest to investigate the methods of those companies who have solved this problem for the benefit of those who have not.

#### Floor Furnace Installations

Floor furnace installations apparently represent a major servicing problem where they exist in any great quantity and where they have been installed in unexcavated houses. This problem has been imposed almost entirely by the installer who in many cases had little regard for making provisions for servicing. There is much to be done in the matter of devising application and installation standards if the evils of the past are to be avoided in the future. The gas industry may have to apply corrective measures if public acceptance of gas heating is not to be impaired from this source. Dealer and customer cooperation should be solicited.

Data as to the deterioration of floor furnaces, due to the conditions under which they operate and also the conditions that are present and may occur, is lacking. This is certainly a subject for further study. One large company reports severe corrosive effect on combustion chambers and flue pipes in floor furnaces installed in pits in unexcavated spaces. Difficulty in obtaining proper combustion is sometimes encountered.

#### Incinerators

Very little information has been received on practices in connection with gas-fired incinerators. What has been received would indicate that dampers in the flue pipe are undesirable. It is quite possible that this type of appliance will gain much more widespread usage, especially by the gas heating customer in the postwar era. It could easily develop into a major service problem unless some preventive measures are instituted.

#### Heat Output in Kitchens

The subject of decreasing heat output to kitchens in summer has gained universal

attention in the gas industry and the necessity to accomplish something tangible in this respect is acknowledged. It is too early to present anything of a conclusive nature at this time, but the research on this subject should be followed closely so that plans can be laid as early as possible. It can be pointed out that measures employed to accomplish this purpose may be closely allied to the solution of the humidity problem in winter. This problem is being considered by the Industrial and Commercial and Residential Sections and we should contribute our thoughts and recommendations.

It is recognized that any efforts by the service department in postwar planning will be limited by the amount of and the timing of information released by the appliance manufacturers as to postwar products. The desirability of setting up some means of gaining this information is recognized in order to present the serviceman's problem to the designers.

#### Analysis of Service Orders

Analysis of service orders is a topic in which all service departments are vitally interested. One of the major difficulties experienced seems to be the failure of many servicemen to properly write out the orders showing the cause of the complaint and measures used to remedy the condition. Perhaps this would be a fertile field for further training. Analysis of service orders has proven the most successful way to determine inherent faults in the design of equipment and, in some cases, defects in the distribution system and types of equipment that fail in one or more respects. The analysis of repeat orders has uncovered a number of causes of complaints that would otherwise remain buried. One company reports that executed service orders are broken

down according to Account Numbers showing the specific appliances involved.

#### Pilot Outages

Pilot outages are being successfully reduced by use of filters. The purpose for which the filter was designed is important. For example, certain type filters were designed to remove vapor phase gum and one member comments that the one they are using will remove gum completely.

There are possibly three vulnerable points of pilot stoppage: (a) the adjustment device, (b) the orifice, (c) the pilot tip or burner port.

The filter should be so located that gas to the pilot must be filtered before contacting any of these points, and, at the same time, the filter should be as close to these points as possible. Overloading of the filter, for example a ¾ foot per hour filter, may cause the filter to become obstructed much sooner than normal.

Substitute materials for copper tubing is an idea that has been advanced and may have considerable merit. Cuprous sulphite or a mixture of cuprous sulphide and cupric sulphide appear to be a strong contributor to pilot outages where the gas is not practically sulfur free.

#### Cleaning Water Heater Coils

Cleaning of hot water heating coils with muriatic acid and chloroform as an inhibitor has been presented as a measure that should prove to be valuable. One member suggests we obtain more details on this subject.

#### Free Service Problem

The matter of the degree to which service should be rendered free to the customer has been found to be a variable one. If no re-



—New York Journal-American

duction in free service has occurred during the war to date, there is some question that the future will justify anything better in this respect. That there is plenty of gold plating is a matter of record in most utilities. This is certainly a promising field for service cost reduction. Some companies are instituting a charge for service plan. The factors of rates, commission rulings, competition, investment return, franchises, etc. must be carefully analyzed.

Some companies feel that in order to meet competition and realize a fair return on their investment, they must either increase rates or institute charge for service plans.

A comment that is worth noting is, "Gas companies should service customers' appliances free to the extent of air and gas adjustment on burners and control calibration and adjustments because:

1. It enables the company to develop and maintain goodwill and satisfactory customer relations, both important.
2. It creates an opportunity for the com-

pany to assist the customer in obtaining the greatest satisfaction from the use of gas.

3. The customers have been educated to expect adjustment service on appliances.
4. It enables the company to keep in touch with the problems that arise from the installation of new appliances sold by distributors and dealers.

"The constituents of good service are:

1. A profound desire to serve.
2. A broad coverage.
3. A prompt, courteous response.
4. A high quality of performance."

Full cooperation between service and home service departments is recognized as most desirable and is in effect with most utilities. The nature of the work of each department makes them supplementary one to another. Customers' requests for assistance in domestic science problems are referred to the home service department.

## Dr. Horace C. Porter

**DR. HORACE CHAMBERLAIN PORTER**, consulting chemical engineer, and a well-known expert on coal, died Wednesday, June 14, while sampling coal for analysis at the Pennsylvania Railroad Freight Yards in Philadelphia. He was 67 years old.

Dr. Porter was born in Urbana, Ill., graduated from the University of Illinois, and received the degree of Doctor of Philosophy from Harvard in 1901.

He was with the U. S. Bureau of Mines from 1907 to 1915 and was one of the pioneers who helped to establish the scientific reputation of the Bureau of Mines in the more efficient utilization of coal. He was a co-author, with F. K. Owitz, of Bulletin No. 1 of the Bureau of Mines, "The Volatile Matter of Coal."

He served as a captain in the Army Ordnance Department from 1917 to 1919, and subsequently opened his office in Philadelphia as a consulting engineer. In addition to a number of technical papers he was the author of a widely used book, "Coal Carbonization," and had been working on a revision prior to his death. His record of scientific and engineering contributions to coal technology has been distinguished.

Dr. Porter was a member of the American Gas Association and he was a familiar figure at the Production Conferences and Conventions of the Association. He was also a member of the American Chemical Society, American Institute of Chemical Engineers, American Society for Testing Materials, Philadelphia Institute of Consulting Chemists and Engineers, Franklin Institute and the Engineers Club. He was one of three delegates of the American Chemical Society to the recent convention

of the Mexican Society of Chemists and Engineers in Mexico City.

His assistance on various committees was considerable. At the time of his death he was vice-chairman of Committee D-5 on Coke and Coal of the American Society for Testing Materials, and a charter member for 18 years of the Advisory Committee to the Bureau of Mines on the Gas, Coke and By-Product Making Properties of American Coals of the American Gas Association.

Surviving are his wife, Mrs. Helen Dana Porter, a daughter, Mrs. W. Lentz Rothwell, and a son, Lieutenant Robert C. Porter, stationed with the Navy Air Corps at Roanoke, Virginia.

Dr. Porter was gifted with a clear mind and intellectual honesty to an unusual degree. He could not compromise with superficial reasoning or hasty conclusions. His many friends will miss his kindly presence and his memory will not soon grow dim.

May he rest in peace and

May light perpetual shine upon him.

—J. S. HAUG

## T. J. Weber Dies

**THEODORE J. WEBER**, identified for many years with public utilities in Grand Rapids and Cadillac, died in May.

Mr. Weber was a native of Switzerland, where his father was a public official. The family had been interested in public utilities and a brother built the Tokyo gas works.

Following his first position with a New York utility, he went to Pontiac where he was superintendent of the gas plant under Harry D. Walbridge. In 1907 he became

associated with the Childs-Hulswit Co., public utilities promotion and financing firm. Later, when this firm developed into the United Light and Power Co., he was identified with the latter concern and had his office in Grand Rapids for a time and later in Chicago.

He left this firm about 16 years ago, buying from it the Cadillac Gas Co., which he managed for several years before selling it to the National Utilities Co. of Michigan. In recent years, he has been a consulting engineer.

## Do This Now

**W**ASTE paper can be found virtually everywhere in office, plant and factory. Every department head can turn up quantities of waste paper, provided management outlines the pressing need for all grades of waste paper and paperboard. There should be one executive in every plant charged with paper salvage responsibility. He, in turn, should impress the entire personnel with the need to conserve paper and to salvage waste paper.

The above is taken from an illustrated booklet describing paper's part in the war and offering various suggestions and publicity items in support of the Waste Paper Salvage Program being conducted by the War Production Board. With waste paper the No. 1 critical war shortage now, every gas company is urged to get behind this campaign and do its utmost to contribute to its success. Copies of the booklet "Industry's 'Four Stakes' in the Industrial Waste Paper Program" will be supplied free by Frank Block, director, Conservation Committee of the Waste Paper Consuming Industries, 370 Lexington Ave., New York 17, N. Y.

## Personnel Service

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**Designing Engineer**—Exceptional opportunity for permanent position with one of the major gas range manufacturers. Must be experienced in gas range design and product development. Must have the ability to coordinate design problems, performance requirements, with field problems and production operation. Must be graduate engineer. Give complete details as to qualifications, age, experience, education. 0391.

We have opening for **manager-engineer** of small water gas utility in east. State full experience, references and salary range. 0392.

**Superintendent** of distribution system, small Ohio company distributors of artificial gas, high and low pressures lines. Experience in house heating desirable. In reply, state experience and other pertinent information. 0393.

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